# Oil, Paint and Drug Reporter

THE CHEMICAL MARKET AUTHORITY

September 5, 1960



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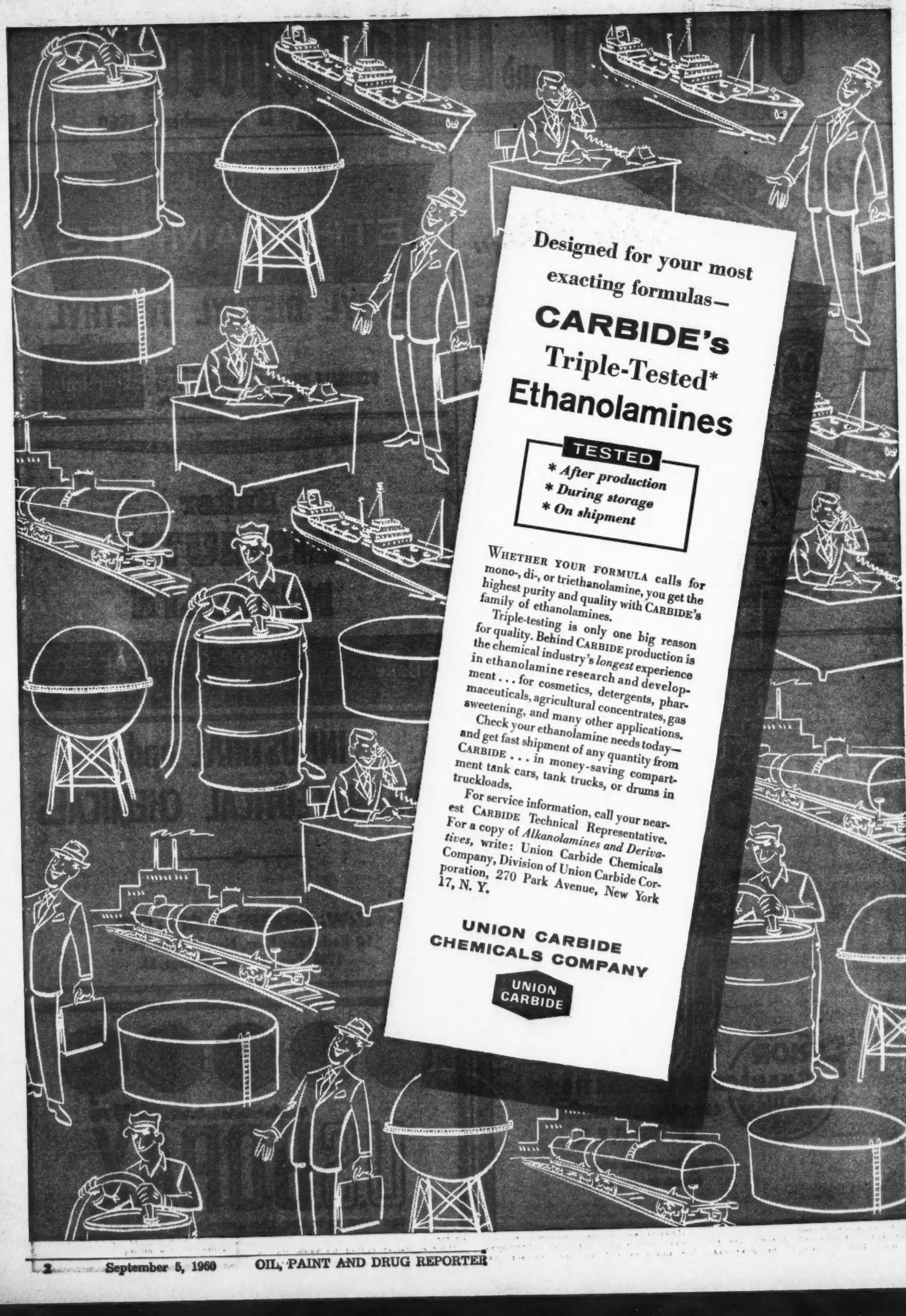
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# Oil, Paint and Drug Reporter

Vol. 178 No. 11 30 Church St., New York 7, N. Y. September 5, 1960


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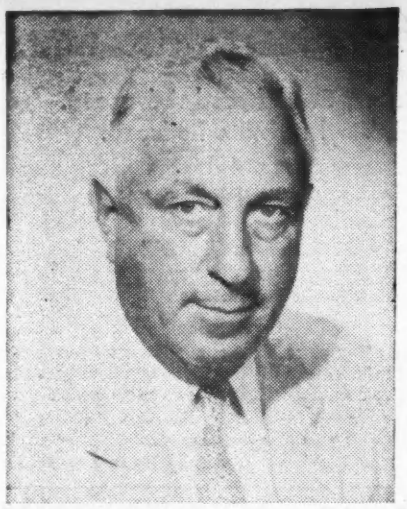

**EXECUTIVES MOVE UP: N. Harvey Collisson (left) appointed senior vice-president and chairman of the staff committee of Olin Mathieson Chemical Corporation, New York, in one of a series of executive advancements. Arthur T. Safford, jr., (right) has been made corporate vice-president for marketing. He had been the company's director of marketing.**

## CBR Warfare's Grim Possibilities Shock a World Premiere Audience

There's a big move on to take chemical, biological and radiological warfare out of the top-security drawer and parade some of its hair-raising possibilities before the general public. Army and congressional sources have decided that John Q. needs to know something of the threat inherent in the science-fiction weapons, and that any disarmament agreement with our enemies should include regulation of CBR activities as well as control of the more highly publicized nuclear weapons.

**NAMED BY GRACE: Ross A. Corio, appointed to the new post of vice-president in charge of marketing and sales for Hatco Chemical Division of W. R. Grace & Co., New York. He had previously been with Union Carbide Chemicals Company, a division of Union Carbide Corporation.**

As the campaign got underway last week, the US army chemical corps, in a world premiere setting, finally threw open to public scrutiny some areas of its ten-year study of CBR weaponry taking place at Dugway, Utah.

**International Conference Sought**

In Washington, Sen. Hubert H. Humphrey called for convening an international conference of technical experts to work on problems of controlling these weapons. Sen. Humphrey is chairman of the senate foreign relations subcommittee on disarmament. He revealed that his subcommittee's report on "Chemical-Biological-Radiological Warfare and Its Disarmament Aspects" will be made available to the public.

At Dugway, a carefully-screened group of spectators was permitted to tour testing areas and witness field demonstrations of CBR weapons, meterological warning systems and other defense devices.

Nerve gas—olorless, tasteless and nearly invisible—and its possibilities for wiping out whole civilian populations drew the hoarsest gasps.

Said Dr. Richard Morse, director of research and development for the army: "There is an urgent need for public awareness of CBR activities on the part of this country, our enemies and our allies."

Dr. Morse said that the defense establishment knows "intense debate may follow" revelation of some development of CBR warfare.

Col. Joseph C. Prentice, director of

—Continued on page 46

## Polyethylene Fires: Probes Still Sputter

The polyethylene flash-fire problem still sputters and flares. Last week the National Board of Fire Underwriters turned its watchdogs loose to join the National Safety Council in an investigation of waste basket fires at the University of Minnesota hospital.

Earlier, OPD reported that the plastics industry was moving to avoid a plastic bag-type scare over the possibilities of flameups in polyethylene containers (OPD, 8/29/60).

The peculiar penchant of polyethylene wastebaskets to flare up from ten to fifteen feet in the air on addition of a small quantity of water after they have been burning for several minutes was

—Continued on page 46

## Abbott Ready to Give AEC Radioisotopes Competition

Abbott Laboratories is going to give the Atomic Energy Commission some competition in the radioisotope chemicals business. Until now, AEC has had this market pretty much to itself.

The North Chicago, Ill., firm plans to put on sale radioactive iodine 131, manufactured in private reactors. Abbott claims that its price will be about 20 percent lower than that quoted by the government agency and that its delivery guarantees to be faster.

AEC reports that Abbott is the first

—Continued on page 47

## Food Additives Slow-Up Bill Looks Pretty Good to Industry But Perhaps Not So to FDA

A prime target for chemical producers on Capitol Hill next session will be a bill authorizing the Secrearty of Health, Education & Welfare to grant further time extensions on clearance of some food additives. The word is now out from Kenneth E. Mulford, chairman of the food additives committee of the Manufacturing Chemists' Association, who kicked off the industry's push for the legislation last week in a talk before the American Bar Association's food, drug and cosmetic law division in Washington.

Under the 1958 law, food additives in use before January of that year needed clearance by March 6, 1960. However, the HEW secretary has the right to grant up to a year's extension—or until March 6, 1961—if there is "no undue risk" to public health involved. Well over 3,000 such extensions have been granted.

**Contingent on Certain Findings**

According to Mr. Mulford, the MCA extension proposal, which sets no specific limit on the amount of additional time sought, is contingent on findings of the HEW Secretary that:

- No undue risk to public health is involved.
- Scientific investigations are being pursued in good faith to assemble the necessary data for regulations.

Just how this notion fits with Food & Drug Administration is not entirely clear, as no official HEW policy on the matter has yet been formulated.

However, last winter when the idea of an automatic indefinite extension of the food additives law gained currency in some industry circles, FDA left no doubt that it was flatly opposed to the suggestion.

The agency concedes that it faces a monumental task ahead in processing food additives petitions, but is not eager to encourage any malingering on the part of manufacturers.

A clue to FDA thinking nevertheless, was provided by John L. Harvey, Deputy Commissioner of Food and Drugs, last week at the same ABA division session. Said Mr. Harvey:

"My own feeling is that those who have food additives problems and have just sat back and done nothing are entitled to no

—Continued on page 42

## Furfural Situation Finds Quaker Oats on the Spot

The recent ½ cent a pound reduction in the tankcar price of furfural—to 11½ cents a pound delivered in the east—indicates a spot in which Quaker Oats Company finds itself.

As sole US producer of the chemical, the Chicago firm in about to lose what well may be its largest single customer and its largest single market for furfural: E. I. duPont de Nemours & Co., and its nylon-66. So say the trade observers.

This became clear last week when the Wilmington, Del., firm confirmed reports that it was discontinuing the manufacture of adiponitrile at its Niagara Falls, N. Y., chemical works late in 1961.

This move, of course, presages a second: duPont's complete switchover to the

—Continued on page 48

**BOARD MEMBER: Vice-president J. L. Christian, elected to the board and the executive committee of Monsanto Chemical Company, St. Louis, Mo. Edward J. Bock and Tom K. Smith, jr., have been elected vice-presidents.**

## Color Additives Law 'Fairhaired' With FDA

Food & Drug Administration, with only four-fifths of the money it says it must have to administer the two new laws adequately, will concentrate on its "fairhaired child," the color additives measure, at the expense of the hazardous substances labeling legislation.

That's the upshot of the $1.2 million in supplemental approporiations voted the agency by congress last week. FDA said it needed $1,528,000 to do a thorough administration job on the color and labeling laws.

However, the house appropriated only $1 million. FDA went before the senate appropriations committee and said its color and labeling operations would be hampered unless it got the full amount it asked. If not, it would have to put its

—Continued on page 63

## Drug Counterfeiter Put Quietly in a Bag by FDA

Food & Drug Administration has quietly bagged a drug counterfeiter in the drug firm's own backyard.

In what is seen as the beginning of a major campaign, the agency has pounced on Discount Drug of Washington, charging it with selling imitation "Miltown" (mepbrobamate tablets), "Diuril" (chlo-

—Continued on page 31

## Live Polio Vaccine Cost Sets the Experts Disagreeing

How much will it cost? That's a question left unanswered by Public Health Service, which last fortnight put its stamp of approval on Sabin live polio vaccine (OPD, 8/29/60).

Early reports from non-industry sources hinted that the oral vaccine might cost as little as one-tenth that of the Salk killed virus vaccine.

Not so, now says Wyeth Lazoratories of Philadelphia, one of three drug houses already gearing up to produce the approved live polio vaccine.

The Sabin vaccine will present one of the most difficult production problems ever experienced in the biological field, Wyeth officials point out.

"Maybe the process will be cheap some day," says a company spokesman, "but it certainly is not going to be cheap initially."

Wyeth's guess is that at the outset the Sabin oral vaccine will cost about the same as Salk injectable vaccine.

The price of Salk vaccine to the doctor now is around $2.50 per 9 cc vial, which is good for nine shots.

Reports out of the University of Cincinnati, where Dr. Albert Sabin developed the approved oral vaccine, indicate that the live polio vaccine cost about 52 cents per test dose.

More concerned with effectiveness than cost, Dr. Sabin says he is convinced that when his vaccine is in production (substantial quantities are not expected before mid-1961), there will be no further need for the Salk vaccine.

He contends that his vaccine is more effective than the killed virus type. Thus, he goes on, it may be regarded as a replacement for Salk vaccine, not merely an aid.

More or less seconding the Sabin view is

—Continued on page 63

### *Plastic Plant Parkas New Winter Wrapping*

A plastic "overcoat" is the latest thing for shrubs and greens.

A new liquid compound, just announced by FX-Lab Company, Livingston, N. J., is said to winterize by wrapping a protective coating around plants. The coating is thrown off as normal plant growth, is resumed in the spring.

# Potash Lode in Southeast Utah: Government Bets on a Bonanza

Development of a deposit of high-grade potash in southeast Utah—believed to be among the richest in the United States—is getting a king-size boost from the Department of the Interior. An Interior order issued last week temporarily withdraws some 9,445 acres of public lands from oil and gas leasing. The lands are in Grand and San Juan Counties, about nine miles southwest of Moab, Utah, near the Colorado River. The high-grade potash deposit was located at a cost of more than $2.5 million through systematic drilling by Delhi-Taylor Oil Corporation.

Interior Secretary Fred. A. Seaton believes that the ten-year withdrawal will make it possible for the deposit to be developed.

In New York, a spokesman for Texas Gulf Sulfur Company says that Interior's action clears a major obstacle to development of the lands by private enterprise. He notes that oil and well drilling is not compatible with potash mining.

Texas Gulf holds an option, which it must exercise before January 4, 1961, to sub-lease these lands from Delhi-Taylor which holds them on lease from the federal government.

Texas-Gulf recently paid the oil firm some $500,000 in advance for these exploitation rights. If the option is picked up before January 4, the money will be applied to whatever rent and royalties are subsequently due to Delhi-Taylor. If Texas-Gulf turns down the option, it loses the $500,000.

Vice-president C. F. Fogarty of Texas-Gulf indicates that a favorable decision on the option by Gulf's board of directors is a stronger possibility now that the oil and gas leasing obstacle has been removed.

He notes that the government's action will be reported at the company's next board meeting on September 15.

Reported plans for development of the lode by Texas-Gulf include construction of a 3,000-foot mine shaft, a 37-mile rail link and a potash processing mill.

The potash deposit will be mined at depths ranging from 2,500 to 5,000 feet. Old oil exploration holes (some over 7,000

—Continued on page 52

### *Vinyl Proving Useful In Heavy Construction*

Vinyl plastic material is proving useful in heavy construction at a new reservoir in the Mojave desert.

B. F. Goodrich Industrial Products Company is furnishing 21,680 square feet of "Koroseal" vinyl plastic sheeting for lining a reservoir near Lancaster, Calif. The sheeting will cost $5,000 less than conventional linings and will hold 2 million gallons of water.

## Petrochemical Plants: New 'Castles' in Spain

Spain is pushing hard for a basic position in petroleum and petrochemicals to back up its young but fast-burgeoning chemical industry. Highlighting the latest series of moves is word that Dow Chemical Company and Union Quimica del Norte de Espana will team up to build a petrochemical complex in that country.

Earlier the Spanish government issued a decree granting oil exploration rights over several million acres of land in the Spanish Sahara to Standard Oil Compny of Ohio and Tidewater Oil Company.

The Spanish chemical company—abbreviated as Unquinesa—is one of Spain's top makers of organics, inorganics and plastics.

Dow and Unquinesa have drawn up a development plan calling for construction of a cracking unit which will produce ethylene and propylene. The resulting $C_4$ fraction will be further processed to recover butadiene.

Off-gas, Dow says, will be used in Unquinesa's existing methanol plant, substitu-

—Continued on page 35

## Nixon-Baldwin Is Seeking Money for Nitration Works

Nixon-Baldwin Chemicals, Inc., Nixon, N. J., has registered $4 million of twenty-year, 6.5 percent subordinated debentures and 160,000 common shares with the Securities & Exchange Commission.

The company, formerly known as Baldwin Chemical Corporation, assumed its present name in June.

Proceeds from the debenture and stock sale are to be applied to permanent financing of the purchase of Nixon Nitration Works, which the company acquired in June.

## Morningstar-Paisley Puts Adhesives Into Production

Morningstar-Paisley, Inc., has started up production of a complete line of industrial adhesives at a new Atlanta, Ga., facility. The plant will also serve as a warehousing and service center for the company's starches, water-soluble gums, polyvinyl acetate resins and plastisols.

Initial annual capacity of the adhesives unit has been set at 12 million pounds. Production will be based on vegetable, animal, casein, synthetic resin and latex materials. The adhesives are of the custom-formulated type for packaging operations and the manufacture of bags, envelopes, paper products, footwear and wood products.

Morningstar-Paisley's sales have risen during the past decade from $6 million in 1950 to an estimated $27 million for this year. Net income for the first six months of 1960 was 12 percent over the like period of last year.

## *The Week's Price Changes*

**Beeswax, Dillweed Oil, Earth Colors, Sandalwood Advanced. Casein, Copra, Lard, Linseed Oil, Vinyl Acetate Reduced.**

### Prices Advanced

Beeswax, crude, African, 2c. per lb. (p. 56).
Dillweed oil, 25c. per lb. (p. 50).
Earth colors, ¼c. to 1c. per lb. (p. 49).
Sandalwood oil, $1 per lb. (p. 50).
Soybean meal, $1 per ton (p. 56).

### Prices Reduced

Casein, Argentine, ¼c. per lb. (p. 49).
Copra, $2.50 per ton (p. 56).
Corn oil, foots, 95%, ⅛c. per lb. (p. 56).
Cottonseed oil, crude, ¼c. per lb. (p. 56).
Refd., ¼c. per lb. (p. 56).
Lard, cash, 9/10c. per lb. (p. 56).
Linseed acid, ½c. per lb. (p. 56).
Linseed meal, 50c. per lb. (p. 56).
Linseed oil, ½c. per lb. (p. 56).
Peanut oil, crude ¼c. per lb. (p. 56).
Refd., ¼c. per lb. (p. 56).
Potassium muriate, 1c. per $K_2O$ (p. 36).
Soybean oil, crude, ¾c. per lb. (p. 56).
Refd., ⅝c. per lb. (p. 56).
Soybean oil foots, 95%, ⅛c. per lb. (p. 56).
Tallow, edible, ¼c. to ½c. per lb. (p. 56).
Vinyl acetate monomer, 1.9c. per lb. (p. 37).

### OPD Price Index

THE OIL, PAINT AND DRUG REPORTER'S relative record of prices of chemicals and related materials is currently as follows:

(100=1949 average)

| Sept. 2, 1960 | August 26, 1960 | Sept. 4, 1959 |
|---|---|---|
| 109.68 | 109.60 | 110.36 |

# Cyclics, Acyclics: Up, Up, Up!

US output of cyclic intermediates soared in 1959, hitting 8.5 billion pounds for a fence-clearing 27.3 percent rise over the previous year's 6.6 billion pounds. Figures are from the Tariff Commission. In another Tariff report just out, big production boosts in 1959 are reported for methanol, formaldehyde, ethyl alcohol, ethylene oxide and a brace of related acyclic chemicals. Of cyclic intermediate production, Tariff reports that a full three-fifths was used captively for further processing while the remainder was sold.

Sales of cyclic intermediates in 1959 amounted to 3.5 billion pounds, valued at $555 million, compared with 2.6 billion pounds, valued at $439 million, in 1958. In terms of quantity, sales of cyclic intermediates in 1959 were 33 percent greater than in 1958 and, in terms of value, 26 percent greater.

In 1959, production of two of the largest-volume intermediates exceeded 1 billion pounds for the fourth successive year. The output of styrene totaled 1.6 billion pounds (28 percent more than in 1958) and that of ethylbenzene, 1.4 billion pounds (21 percent more than in 1958). Ethylbenzene is used almost entirely in the manufacture of styrene, which, in turn, is used in the manufacture of plastics materials and synthetic rubber.

Other large-volume intermediates, the output of which was substantially larger in 1959 than in 1958 were monochlorobenzene (45 percent larger), phenol (37 per-

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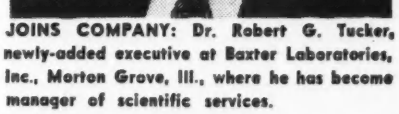

**JOINS COMPANY: Dr. Robert G. Tucker, newly-added executive at Baxter Laboratories, Inc., Morton Grove, Ill., where he has become manager of scientific services.**

## Oronite 'Alkane' Climbs; First Time in Four Years

Oronite Chemical Company, San Francisco, Calif., has just announced a ½ cent per pound increase in the price of the company's "Alkane" dodecylbenzene detergent alkylate. The increase covers both "Alkane 56" and "Alkane 60."

The new price will be 11½ cents per pound in tankcars, f.o.b. Richmond, Calif., freight equalized with nearest competitive producing point.

This is the first increase in the price of Oronite "Alkane" in four years, during which period, the company points out, all costs have had a significant rise.

## Dow Badische Butanol Unit To Start Up in Early 1961

Dow Badische Chemical Company is building plant facilities to produce butanols. The new facilities are at Freeport, Tex,

Completion of the plant and first shipment are scheduled early in 1961. Products, n-butanol and iso-butanol, will be sold through Dow Chemical Company.

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**MANAGER: Dr. R. W. Quarles, made manager of patents and licenses for Union Carbide Plastics Company, New York, a division of Union Carbide Corporation.**

## Monsanto Tells Plans For Property Option

Phthalic anhydride and phthalate ester plasticizers—that's what Monsanto Chemical Company has in mind for that 650-acre parcel of New Jersey land on which it acquired options back in late 1959 (OPD 11/15/59).

The St. Louis, Mo., firm has just acquired full title to the land and will begin construction immediately on a multi-million dollar production unit. Completion of the project is slated for early 1962.

The site is in Gloucester County, N.J., twenty miles southwest of Camden on the Delaware river, opposite Chester, Pa.

The new plant will be Monsanto's third and largest in New Jersey and its twenty-third in the US. Its existing Jersey installations are at South Kearny and Camden.

Through the new facilities, Monsanto's PA capacity will be hiked by more than 30 percent, and its phthalate potential by more than 50 percent.

PA production, which ran at 360 million pounds in 1959 in spite of the steel-strike induced shortage, is expected to be responding to a demand level of 450 million pounds by 1965, according to Monsanto.

Monsanto expects naphthalene, the PA raw material, to be freely available soon as the result of new sources of supply in the petroleum industry.

## Olin Mathieson Slates Caustic-Chlorine Unit

Whatever the wave of the future may bring, its a cinch that the brine from that wave will be electrolyzed into caustic soda and chlorine.

Latest firm to hitch a bigger piece of its future to the caustic-chlorine star is Olin Mathieson Chemical Corporation. The New York-based company will start construction immediately on a $13 million caustic-chlorine unit at Charleston, Tenn.

This is in addition to the firm's $30 million chemicals expansion program that was announced a year ago. Included in that announcement was improved chlorine facilities at the company's Niagara Falls, N.Y., alkali installation.

The Charleston unit will have a capacity of 180 tons a day. It will be located on a 600-acre site along the Hiwassee River, a navigable tributary of the Tennessee. Power for operations will be supplied by Tennessee Valley Authority.

# Explosives Transportation Law: Not What the Doctor Ordered, But Industry Can Swallow It

The bill changing the present law on the transportation of explosives may not be entirely to the liking of the chemical industry, but it could be worse—lots. That's the Capitol Hill verdict on S 1806, which was approved by the senate last week and is now at the White House awaiting President Eisenhower's signature. Congressional veterans are agreed that in the final version of the legislation, which is designed to bring the antiquated code on combustibles up to date, Manufacturing Chemists' Association has salvaged a great deal from what at first appeared to be a losing cause.

Testifying before a house judiciary subcommitte three months ago (OPD, 5/30/60), MGA made it very clear that it thought the measure—as then written—would be more damaging than helpful. What it didn't like most about the earlier form of the bill was:

- The downgrading of the Bureau ot Explosives.
- The penalty provisions which would revamp that section in the present law.

**Bureau of Explosives Regains Status**

The bill emerging from the senate says that the Interstate Commerce Commission may continue to seek the advice of the Bureau of Explosives.

The earlier version would have amended the law to provide that ICC could utilize the services of carrier and shipper associations, but made no specific reference to the Bureau of Explosives—an organization that has served as a government-industry liaison on explosives transportation matters for fifty years.

The bill in its final form also continues the language of the penalty provisions in the present law. This means that a firm must "knowingly" violate the law to be liable to conviction.

As previously written, the measure stated that a company need only be "aware" that ICC had issued regulations to be subject to penalties.

One of the major changes opposed by MCA got through. This makes the combustibles code apply to private and contract as well as common carriers. The present code applies only to common carriers.

The measure also requires that certain standards of packaging be met for all ex-

*—Continued on page 43*

## Dow, Allied Labs Merger Now Up to Stockholders

A proposed merger of Allied Laboratories, Inc., Kansas City, Mo., into Dow Chemical Company, Midland, Mich., has been approved by directors of both firms.

The proposal is subject to ratification of Allied stockholders at a meeting called for November 30 in Wilmington, Del. Under the merger plan, Dow would distribute two-thirds of a share of its common for each share of Allied stock.

Allied would continue to operate under its present officers as a Dow division. No change in personnel or in operating plan of Allied Laboratories is planned by Dow.

Allied is a diversified producer of pharmaceutical and biological products as well as certain proprietary and cosmetic lines. Its plants are located at Indianapolis and Zionsville, Ind.; Sioux Falls, S. D., and Batavia, Ill.

## Hepatonic Bill in White House

Now at the White House awaiting President Eisenhower's signature is a bill (HR 12659) suspending the duty for three years on hepatonic acid, a material used in the production of special lubricants for military aircraft and brake fluids.

**TAKES TECHNICAL POSTS: Dr. Patrick H. Seay, appointed assistant director of research and director of biological research for McNeil Laboratories, Inc., Philadelphia.**

## Nylon's Popularity Rising With Celanese

Celanese Mexicana, S.A., newest entry in the nylon tire cord arena (OPD, 8/29/60), has decided to expand its production facilities for filament nylon textile yarn. The Celanese Corporation of America affiliate will construct new facilities at its existing plant located in Ocotlan, in the state of Jalisco, Mexico. The expansion, adding 1,000 tons a year of new capacity, is targeted for completion in late 1961.

Since the existing plant was completed in 1956, it has been expanded several times in response to increased demand, Celanese notes. With the newest addition, the company believes Mexico will no longer have any dependency upon imports for nylon.

Expansions in nylon products, the company adds, reflect Celanese Mexican's "confidence in the general Mexican economy and the important role it forsees for the part nylon fibers will play in the country's future."

The company's tire cord facilities are

*—Continued on page 52*

## National Distillers Slating Union With Fertilizer Firm

Merger of Federal Chemical Company Louisville, Ky., a seventy-six year old six-plant manufacturer of mixed fertilizer, with National Distillers & Chemical Corporation, New York has been aproved in principle by the boards of both companies.

National Distillers will offer approximately eight shares of its common stock for each outstanding share of Federal Chemical common stock and four common shares for each Federal preferred share. Federal has 20,000 common shares and 21,494 preferred shares currently outstanding.

# Business Better, But P. A.'s Note Lack of 'Oomph'

There is some evidence that business is beginning to emerge from the summer lull. But, there is still no "oomph" to the economy and most purchasing executives look for a continuation of the "sidewise" movement in the immediate weeks ahead.

However, our production and new order statistics have definitely improved in the last thirty days. The pick-up in new orders is particularly encouraging. A jump to 35 percent reporting an improved order

*This report was prepared by the business survey committee of the National Association of Purchasing Agents.*

situation contrasts with 24 percent in this category in July. Similarly, where 36 percent said their orders were down last month, only 23 percent so report this month.

While the production figures are also better, the change is not quite as great. Here, 26 percent tell of higher production, compared with 22 percent in July, and 25 percent indicate a lowered production rate, compared with 30 percent in July.

There are also indications that the downward price slide has halted. General competition remains keen and good buys can readily be negotiated at, or only slightly above, the low prices of thirty days ago.

However, there is no change in inventory policy and the emphasis is still on reducing purchased material stocks on hand, rather than making any effort to increase them. Forward commitments are being held to the minimum required to meet production schedules.

Employment continues to be a problem, with more of our members reporting reductions than those reporting increases. The opinion is expressed, however, that this situation is likely to improve as production of the new 1961 automobiles gets into full swing.

What about production facilities and other capital improvements? This is always a sensitive barometer and our special question this month sought to determine if business during the balance of 1960 could look for a boost as a result of

*—Continued on page 34*

## Petrochemical Project Awaits Argentine Okay

A group of US industrial concerns will start construction of a $7.5 million complex of petrochemical plants in Argentina as soon as approval is secured from the Argentine government.

The firms are Continental Oil Company, Cities Service Company, US Rubber Company, Witco Chemical Company, and Fish International, an affiliate of Fish Engineering Corporation.

The plants will take some thirty-six months to complete, with initial units in production within eighteen months. They will be located at San Lorenzo, a deep water port on the Rio Parana. Operating them will be PASA, an Argentine corporation formed by the US group earlier this year.

Output is expected to total 45,000 tons a year of synthetic rubber, 11,500 tons of carbon black and 7,000 tons of styrene, plus whatever styrene is needed in SBR output.

The facilities will also turn out 1,290 barrels of aviation alkylate and 839 barrels of benzene a day, plus intermediates used in SBR production.

# Drugs in Milk Are Attacked on New Front by FDA

Food & Drug Administration is now convinced that its original ideas about how to keep drugs out of the nation's milk supply didn't go far enough.

The agency last week issued a new, broader set of labeling requirements, covering all dosage forms packaged for veterinary use.

Where the earlier proposal was aimed only at certifiable antibiotics for intramammary infusion (OPD, 4/18/60), the new order applies to both certifiable and non-certifiable antibiotics as well as to other dosage forms. Not included, however, are products for infusion into the udder.

The new rules, which become effective November 29, require drug manufacturers to use one of the following two statements on pharmaceutical preparations sold for use in milk-producing animals:

> **Warning:** Not for use in animals producing milk, since this use will result in contamination of the milk.
>
> **Warning:** Milk taken from treated animals within . . hours after the latest treatment must not be used for food.

The blank is to be filled in with a figure (not greater than 96). The actual number will be determined by the FDA Commissioner on the basis of data supplied to him by the pharmaceutical maker.

This information must, in the commissioner's opinion, be adequate to prove that the milk from treated animals will contain no residues after . . . (the specific number) hours.

If the drug preparation does not show up in the milk, neither of the above warning statements will be required.

Extension of the regulations to non-certifiable antibiotics and other drugs indicates that the agency is also worried about milk contamination from such veterinary preparations as sulfanilamides and oral antibiotics.

Its earlier concern was only with certifiable antibiotics administered either intravenously or intramuscularly.

### *Fertilizer Use Trick: It's Where You Put It*

Where you put it is just as important as how much you use when it comes to the application of fertilizer. That's what the American Society for Horticultural Science heard recently from Werner L. Nelson, midwest director of American Potash Institute.

Placement, he emphasized, affects many aspects of plant growth, including stand, pest control, earliness, yield and quality.

# Shopping for Surface-Active Agents?

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# *Sea Water: Price Is Right*

A thousand gallons of potable water from salt or brackish sources for only 50 cents?

That's a distinct possibility in the very near future, says Secretary of the Interior Fred A. Seaton.

Such a price would put it within a dime of what many Americans now pay for water from their taps, he pointed out in Freeport, Tex., last week at ground-breaking ceremonies for the first of five saline water conversion demonstration plants projected by the department.

How does this stack up with water prices around the world? Here are a few comparisons offered by the Interior Secretary:

- In the oil-producing sheikdom of Kuwait in the Middle East, the cost per thousand gallons of water is nearly $3.
- At Morro Bay on the California Coast, Pacific Gas & Electric Company for some years has been converting about 144,000 gallons of water daily. Cost per thousand gallons: about $2.60.
- The atomic submarine Nautilus and Triton convert sea water into fresh via atomic energy. The cost ranges between $5 and $10 per thousand gallons.

The Freeport facility—an Interior project in cooperation with Dow Chemical Company, Midland, Mich., and eight other firms in Texas—"will do much better" than any of these, Mr. Seaton promises.

"With it," he reports, "we hope to slash deeply into cost—a slash which will allow us to produce a thousand gallons of fresh water for $1, or even less."

What's more, he is confident

—*Continued on page* 48

# Chemical Plants on Top of Plants: Wall Street Sees a Reason for It

"Why?" asks Value Line Investment Survey. The influential Wall Street analyst wants to know why the chemical industry, struggling with its notable overcapacity, is yet plunging into ever greater plant expansions during this period of rugged, no-holds-barred competition. For one thing, Value Line notes that the current pace of chemical plant expansion activity is bound to skim the cream off potential profits during the next year or so. And if the economy should turn down, chemical earnings would consequently drop more precipitously than those in other lines, as they did in early 1958.

**HEADS COMPANY: Allen W. Haynie, formerly executive vice-president, elected president of Reedville Oil & Guano Company, and also of Haynie Products, Inc., sales and marketing division of Reedville.**

But here's the answer: By providing the basis for future sales and earnings growth, current plant expansions are, in the opinion of the survey, "soundly based."

**A Pause Is Here**

A pause in the earnings growth of the chemical industry has developed, due primarily to too much capacity in most product lines, begins the current issue of Value Line. As a result, competitive marketing is seen putting ever greater pressure on prices.

Moreover, Value Line points out that newer products such as nylon tire cord and polypropylene are cutting into markets for established items (rayon and polyethylene). Profit margins throughout the

—*Continued on page* 62

## Sun Makes Jacobson V.P.

Eugene Jacobson has been elected vice-president of Sun Chemical Corporation. Mr. Jacobson organized Facile Corporation, Patterson, N.J., and served as its president until it was sold to Sun Chemical in 1959.

## Tung Oil, Nut Imports Undergoing Tariff Probe

Tariff Commission is looking into the question of whether imports of tung oil and tung nuts after October 31 will nullify or materially interfere with the Department of Agriculture's price supports for tung nuts.

The commission also wants to know if the imports will substantially cut the amount of products processed in the US from tung nuts under the price prop program.

President Eisenhower has set an annual

—*Continued on page* 63

**OPD Reports From Europe**

# Chemical Growth Overseas Is Sparked by Two Things: Local Vigor and US Imports

Chemical expansion plans and projects in Europe are moving at a heady clip. This, say some long-time observers, testifies to the vigor of the industry in 1960 and to attempts to counteract the rising tide of chemical imports, mainly from US firms. One of those commenting is Sir Graham Hayman, chairman of Distillers Company, Ltd., in Britain. He reports that capital spending of the company's subsidiary British Hydrocarbon Chemicals, Ltd. (jointly owned with British Petroleum Company) is so heavy at the present time it "will involve some reduction in the dividend we shall receive (from BHC) during the current year."

This is a cause for optimism, though, says Sir Graham for "these developments should offer important new outlets for sales and increasing earnings."

**Chemicals Are Looking Up**

Distillers Company does not report its sales volume, but the firm notes that in the fiscal year ended March 31, 1960, the industrial group, largely chemicals, accounted for 20 percent of the profits and whisky and gin 80 percent. The industrial group had an increase of 27 percent in its earnings during the fiscal year.

Among the British Hydrocarbon Chemicals projects is one for increasing butadiene production, a new methanol plant and completion of a unit to produce ethylene dichloride for polyvinyl chloride manufacture. A new cracking plant with capacity of 70,000 tons of ethylene a year was commissioned in June. Among its own chemical projects, Distillers lists a new plant to produce acetic acid, using a process developed by the company which it claims will give significant economies.

In the second half of this year, a French company, Naphtachimie, jointly owned by Pechiny and the French subsidiary of British Petroleum Company, will have its ethylene capacity at 30,000 tons a year, its propylene capacity at 32,000 tons a year, and its other olefins at 23,000 tons

With a polypropylene license of Montecatini of Italy, Naphtachimie expects to start up a small pilot polypropylene unit before the year ends. Next year, plants

—*Continued on page* 39

**IN NEW JOB: Jack R. Siegelbaum, made product sales manager of the plasticizer division of Reichhold Chemicals, Inc., White Plains, N.Y. He had been product manager of the company's chemical division.**

## Helium Purchase Powers Are Given to Interior Dep't

Just before adjournment last week, congress passed a bill (HR 10548) empowering Department of the Interior to buy helium from private industry.

At present, Interior is producing helium at five government-owned plants, but has no authority to purchase the fast-vanishing gas from private producers.

The new law, which will go into effect on March 1, 1961, is aimed at conserving the nation's supply of helium. While Interior plants are producing helium in excess of demand right now, the department figures that by 1985 calls for the gas will far exceed available production.

The legislation is designed to get at a hitherto neglected source of helium: natural gas. The helium now goes up the flue as waste gas, Interior says, and the new

—*Continued on page* 63

## NACA Picks Speaker: Mississippi Legislator

Rep. Jamie L. Whitten of Mississippi, chairman of the house agriculture appropriations subcommittee, will be the featured speaker at the twenty-seventh annual meeting of the National Agricultural Chemicals Association, to be held September 27 to 29 at the del Coronado hotel, Coronado, Calif.

Speaking at the luncheon session on the first day of the meeting, Mr. Whitten will present his views on some of the broad farm issues of the day.

He will also discuss the key role played by chemicals in the world's food supply

—*Continued on page* 33

## Metal & Thermit Acquires Orefraction Minerals, Inc.

Metal & Thermit Corporation, New York, is expanding its interests in the minerals field through acquisition of Orefraction Minerals, Inc., Andrews, S. C.

Orefraction supplies granual and dry milled zircon for the foundry, refractory, ceramic and glass industries.

# *Association Meetings*

**Air Pollution International Congress, New York, September 10-11**

American Association of Textile Chemists & Colorists, national convention, Sheraton hotel, Philadelphia, October 6-8.

American Chemical Society, national meeting, New York, September 11-16.

American Council of Independent Laboratories, annual meeting, Deauville hotel, Miami Beach, Fla., October 11-15.

American Institute of Chemical Engineers, May hotel, Tulsa, Okla., September 25-28.

American Oil Chemists' Society, fall meeting, New Yorker hotel, New York, October 17-19.

American Tung Oil Association, annual convention, Edgewater Gulf hotel, Edgewater Park, Miss., September 28-29.

Armed Forces Chemical Association, annual meeting, Sheraton-Park hotel, Washington, D. C., September 15-16.

Association of Consulting Chemists & Chemical Engineers, annual meeting, Shelburne hotel, New York, October 25.

Canadian Agricultural Chemicals Association, annual meeting, Britannia hotel, Lake of Bays, Muskoka, Ontario, September 12-14.

Canadian Manufacturers of Chemical Specialties Association, annual meeting, Queen Elizabeth hotel, Montreal, Que., Canada, October 24-26.

**Chemical Institute of Canada, western regional conference, Regina, Sask., September 8-10.**

Chemical Market Research Association, Wentworth-by-the-Sea, Portsmouth, N. H., September 22-23; Pittsburgh Hilton hotel, Pittsburgh, Pa., November 9-10.

Drug, Chemical & Allied Trades Association, annual meeting, Sagamore hotel, Bolton Landing, Lake George, N. Y., September 15-18.

Electrochemical Society, Shamrock hotel, Houston, Tex., October 9-13.

Federation of Societies for Paint Technology, annual meeting, Sherman hotel, Chicago, October 31-November 2.

Manufacturing Chemists Association, semi-annual meeting and midyear conference, Statler Hilton hotel, New York, November 22.

National Agricultural Chemicals Association, annual meeting, Del Coronado hotel, Coronado, Calif., September 27-29.

National Drug Trade Conference, annual meeting, Gramercy Park hotel, New York, December 16.

National Foreign Trade Council, national meeting, Waldorf-Astoria hotel, New York, November 14-16.

National Paint, Varnish & Lacquer Association, annual convention, Drake hotel, Chicago, October 27-29.

Packaging Institute, annual national packaging forum, Statler-Hilton hotel, New York, October 31-November 2.

Parenteral Drug Association, annual convention, Statler hotel, New York, October 19-21.

Pharmaceutical Manufacturers Association, eastern regional meeting, Waldorf-Astoria hotel, New York, December 12-14.

Salesmen's Association of the American Chemical Industry, annual sales clinic, Roosevelt hotel, New York, November 14.

Society of the Plastics Industry, New England section conference, Wentworth-by-the-Sea, Portsmouth, N. H., October 13-14.

Stanford Research Institute, symposium on chemical reactions in the lower and upper atmosphere, Mark Hopkins hotel, San Francisco, April 18-20, 1961.

Synthetic Organic Chemical Manufacturers Association, monthly luncheon meeting, Roosevelt hotel, New York, September 13.

Toilet Goods Association, scientific section's winter meeting, Waldorf-Astoria hotel, New York November 30.

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# CHEMICALS AND RELATED MATERIALS

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# Current MARKET Quotations

Unless otherwise indicated, listings are first-hand quotations prevailing, according to information and belief, September 2 on large lots, f.o.b. New York, with the lowest in the left-hand column and the highest in the right-hand column. The listings do not represent bid and asked prices nor a range over the week. Differences between high and low may be accounted for by differences in quantity, quality, locality, or individual suppliers' views. An index to the weekly market reports is to be found on page 4.

## A

Abies siberica oil, cns. ..... lb. 1.90 - 2.40
Acacia (see Arabic gum).
Acetaldehyde 99%, dms., c.l., works. lb. .12 - —
dms., l.c.l., works ..... lb. .13½ - —
tanks, works ..... lb. .10 - —
Acetaldol (see Aldol).
Acetanilide, tech., flaked, bbls., bgs., c.l., frt. alld lb. .32½ - —
bbls., bgs., ton lots, frt. alld. lb. .33½ - —
bbls., bgs., smaller lots, frt. alld lb. .36½ - —
USP, bbls., 225-lb. dms., any quantity lb. .79 - —
100-lb. dms., any quantity lb. .81 - —
Acetic acid, coml., or redist., 28%, bbls 100 lbs. 4.80 - —
56%, bbls. ..... 100 lbs. 8.25 - —
70%, bbls. ..... 100 lbs. 9.95 - —
80%, bbls. ..... 100 lbs. 10.45 - —
Acetic acid, glacial, syn., CP, dms., dlvd 100 lbs. 22.00 - 23.00
tech., dms., c.l., dlvd 100 lbs. 13.75 - —
dms., l.c.l., dlvd ..... 100 lbs. 15.25 - —
tanks, dlvd. ..... 100 lbs. 10.00 - —
USP, cbys., dlvd ..... 100 lbs. 31.00 - 32.00
Acetic anhydride, aluminum ret. dms., c.l., dlvd. E lb. .16½ - —
aluminum ret. dms., l.c.l., dlvd. E. lb. .18 - —
tanks, dlvd. E ..... lb. .14 - —
Acetoacetanilide, fib. dms., c.l., dlvd lb. .80 - —
fib. dms., l.c.l., dlvd ..... lb. .81 - —
Acetoacet-o-chloroanilide, fib. dms., c.l., dlvd lb. 1.35 - —
fib. dms., l.c.l., dlvd ..... lb. 1.36 - —
Acetoacet-o-toluidide, fib. dms., c.l., dlvd lb. .82 - —
fib. dms., l.c.l, dlvd ..... lb. .83 - —
Acetone, CP, dms., c.l., dlvd lb. .10½ - —
dms., l.c.l., dlvd ..... lb. .12 - —
tanks, dlvd. ..... lb. .08 - —
Acetonitrile, dms., c.l., t.l., dlvd lb. .35 - —
dms., l.c.l., dlvd ..... lb. .36½ - .37
tanks, dlvd. ..... lb. .32 - —
Acetophenetidin, USP, 200-lb. dms., 1,000 lbs., frt. alld lb. 1.20 - —
100-lb. dms., 1,000 lbs., frt. alld. lb. 1.22 - —
Acetophenone, cns., dms ..... lb. .42 - 1.30
Tech., dms., c.l., works ..... lb. .47 - —
dms., l.c.l., works ..... lb. .47¾ - —
tanks, works ..... lb. .45 - —
N-Acetyl-p-aminophenol, dms., t.l. (min. 23,000 lbs.), frt. adjusted lb. 1.24 - —
dms., 5,000-lb. lots, same basis lb. 1.30 - 1.45
dms., smaller lots, same basis lb. 1.35 - 1.63
Acetylene black, imp., bgs., c.l., duty and freight extra lb. .20 - —
cs., l.c.l., ex whse ..... lb. .25½ - .31
Acetylene tetrabromide, 16-dm. lots or more, f.o.b. works lb. .53 - —
Acetylsalicylic acid, USP, cryst. (20, 40 mesh), powd. (80 mesh), 250-lb. dms., c.l., pt. of shipt lb. .56¼ - —
USP, 10% starch granulation, 12-50 mesh, white, 250-lb. dms., c.l., same basis lb. .56¼ - —
(Pink and green granulations 5c. per lb. higher.)
Freight equald, shipt. identical quantity over standard routes, from N.Y., Phila., Midland, Mich., Chicago and St. Louis.
Acetyltributyl citrate, tech., non-ret. dms., c.l., frt. alld. E. of Denver lb. .35½ - —
non-ret. dms., l.c.l., frt. alld. E. of Denver lb. .36½ - —
tanks, frt. alld. E. of Denver. lb. .33 - —
non-ret. dms., c.l., frt. alld. E. of Denver lb. .39½ - —
non-ret. dms., l.c.l., frt. alld. E. of Denver lb. .40½ - —
tanks, frt. alld. E. of Denver lb. .37 - —

### ACIDS

**Acid quotations are listed individually. For example, prices on Acid, cresylic, may be found in the C's under Cresylic acid.**

Aconite root, bls. ..... lb. .50 - .55
Acrolein, tech., dms., c.l., works lb. .36 - —
dms., l.c.l., works ..... lb. .36¾ - —
tanks, works ..... lb. .31 - —
Acrylamide, dms., t.l., f.o.b. works. lb. .58 - —
dms., l.t.l., same basis ..... lb. .60 - —
Acrylic acid, glacial, dms., c.l., t.l., dlvd lb. .42½ - —
dms., l.c.l., l.t.l., dlvd ..... lb. .43½ - —
tanks, dlvd. ..... lb. .40 - —
tech., esterification, dms., t.l., frt. prepaid lb. .41½ - —
tanks, same basis ..... lb. .39 - —
tech., polymerization, dms., t.l., f.o.b. shipping point lb. .42½ - —
tanks, same basis ..... lb. .40 - —
Acrylonitrile, dms., c.l., t.l., frt. equald lb. .26 - —
dms., l.c.l., l.t.l., frt. alld ..... lb. .27 - —
tanks, frt. equald ..... lb. .23 - —

## Abies Siberica Oil—Ammonium Bicarbonate

Adeps lanae (see lanolin).
Adipic acid, bgs., c.l., dlvd ..... lb. .32¼ - —
bgs., l.c.l., dlvd ..... lb. .35 - —
Agar, USP, Kobe No. 1, strip, bls. lb. 2.65 - 2.75
powd., 30 mesh., fib., dms lb. 2.40 - —
dl-Alanine, dms., 100-lbs. or more, f.o.b. works lb. 5.25 - —
dms., 1-99 lbs., same basis ... lb. 10.00 - —
Aldol, 95%, dms., l.c.l., works lb. .28 - —
Aldrin, tech., fib. dms., c.l., t.l. dlvd lb. .99 - —
fib. dms., l.c.l., dlvd ..... lb. 1.04 - —

### ALCOHOLS

**Alcohol quotations are listed individually. For example, prices on Alcohol, furfuryl, may be found in the F's under Furfuryl alcohol.**

Aletris root, bgs ..... lb. 1.50 - 1.75
Algin (see Sodium alginate)
Alizarin (see 1,2-Dihydroxy anthraquinone).
Alkali blue dry, 250-lb. bbls., dlvd. E. of Rockies lb. 2.38 - —
Alkali blue, toner, litho flushed, 125-lb. bbls., same basis, lb. 1.33 - —
Alkali blue prices 1c. higher W. of Rockies.
Allethrin, 90%, dms., frt. alld lb. 28.80 - 28.90
Soln., 20%, dms., 200-2,000 lb. lots, frt. alld lb. 6.50 - 6.55
2½% dms. frt. alld. ..... lb. .95 - 1.10
Allspice oil (see Pimento oil).
Allyl alcohol, dms., c.l. dlvd ..... lb. .32½ - —
dms., l.c.l., dlvd ..... lb. .34 - —
tanks, dlvd. ..... lb. .30 - —
Allyl bromide 55-lb. cbys. 5,005 lbs. or more, works lb. 1.47 - —
55-lb. cbys., 1,045 to 4,950 lbs., works lb. 1.52 - —
55-lb. cbys., 55 to 990 lbs. works, lb. 1.57 - —
Allyl chloride, dms., c.l., dlvd .. lb. .17½ - —
dms., l.c.l., dlvd ..... lb. .19 - —
tanks, dlvd ..... lb. .15 - —
Allyl isothiocyanate (see Mustard Oil, syn.).
Almond oil, artif., bitter (see Benzaldehyde)
Almond oil, nat., bitter, f.p.a., bots. lb. 2.75 - 3.45
NF, bots. ..... lb. 3.00 - 3.30
sweet, USP, cns., dms ..... lb. .70 - 1.30
Aloe, Cape, cs ..... lb. .30 - .38
powd., cs. ..... lb. .60 - .65
Curacao, kgs. ..... lb. .60 - .70
powd., kgs. ..... lb. .70 - —
Aloin, USP, bbls., dms., kgs .... lb. 3.25 - 3.75
Alphanaphthol (see a-Naphthol).
Alphanaphthylamine (see a-Naphthylamine).
Alphanitronaphthalene (see a-Nitronaphthalene).
Alphapicoline (see a-Picoline).
Alphaterpinol (see a-Terpinol).
Alphatocopherol (see a-Tocopherol).
Alum ammonium, gran., bgs., works 100 lbs. 4.30 - —
Lump, dms., works ..... 100 lbs. 5.05 - —
Powd., dms., works ..... 100 lbs. 5.20 - —
USP, burnt., dms ..... lb. .20 - .21
hydrous, dms. ..... lb. .07¾ - .08
Alum potassium, gran., bgs., works. 100 lbs. 4.55 - —
Lump, dms., works ..... 100 lbs. 5.30 - —
Powd., dms., works ..... 100 lbs. 5.45 - —
USP, burnt., dms ..... lb. .20 - .21
USP, hydrous, dms ..... lb. .07¾ - .08
Alum, potash-chrome, dms ..... lb. .17 - —
Alumina, calcined, bgs., c.l., works. lb. .05¼ - —
bgs., l.c.l., works ..... lb. .05½ - .08¼
Aluminum acetate, basic soln., 24%, bbls., l.c.l, works lb. .14 - —
Aluminum chloride, coml., anhyd., dms., c.l., works, frt. equald lb. .16 - —
dms., l.c.l., works ..... lb. .16½ - —
cryst., dms., c.l., works 100 lbs. 21.00 - —
dms., l.c.l., works ..... 100 lbs. 21.50 - —
Soln., 32° cbys., c.l., works .... lb. .049 - —
cbys., l.c.l., works ..... lb. .057 - .109
tanks, works ..... 100 lbs. 3.95 - —
NF, gran., dms., works ..... lb. .31 - .32
Aluminum fluoride, tech., anhyd., bgs., c.l., works lb. .16¼ - —
bgs., l.c.l., works ..... lb. .17¼ - .19¼
bulk, c.l., basis 80% ..... lb. .14½ - —
Aluminum fluoride in fib. dms. 0.35c per lb. higher.
Aluminum formate, basic soln., containers extra, c.l., works. 100 lbs. 11.00 - —
containers extra, l.c.l., works. 100 lbs. 11.50 - —
Aluminum hydrate, heavy, bgs., c.l., frt. equald lb. .036 - —
bgs., 20,000-40,000 lb. lots, same basis lb. .039 - —
bgs., 2,000-20,000 lb. lots, same basis lb. .049 - —
bulk, c.l., same basis ..... lb. .03¼ - —
Aluminum hydroxide, dried, USP XV, fib. dms., works lb. .82½ - —
fib. dms., contract, works lb. .79½ - —
Aluminum hydroxide, gel, pharmaceutical, 14-15% $Al_2O_3$, fib dms., works lb. .22 - —
9-9½% $Al_2O_3$, fib. dms., works. lb. .19 - —
fib. dms., contract, works lb. .18 - —
Aluminum hydroxide, tech., powd., (see Aluminum hydrate).
Aluminum metal, 99½% + 30-lb. ingots, 10,000-lb. lots, frt. alld lb. .281 - —
50-lb. pigs, 10,000-lb. lots, frt alld. lb. .26 - —
Aluminum oxide, amorphous (see Alumina, calcined).
Aluminum paste, lining, extra-fine, dms lb. .71 - —
Standard grade, dms ..... lb. .48½ - —
Aluminum powder, lining, extra-fine, dms lb. 1.13 - —
Standard grade, dms ..... lb. .83 - —
Aluminum paste and powder prices are f.o.b. shipping point. Add 1c. per lb. for 100-lb. dm., 1½c. per lb. for 50-lb. dm., 3c. per lb. for 10 lb. can and 5c. to 12c. per lb. for smaller containers. Deduct 1c. per lb. for single shipment of 400 to 1,499 lbs. 2c for 1,500 to 4,999 lbs., 3c. for 5,000 to 29,999 lbs. and 4c. for 30,000 lbs. or more. Where destination is within the continental U. S., a deduction equivalent to the lowest available common carrier transportation rate will be made from seller's invoice on orders of 200 lbs. or more.
Aluminum resinate, precip., 3.4% Al, dms lb. .40¼ - —
Aluminum stearate, dibasic, ctns., c.l lb. .39 - —
ctns., l.c.l. ..... lb. .40 - .44
Monobasic, ctns., c.l. ..... lb. .39 - —
ctns., l.c.l. ..... lb. .40 - .44
Tribasic, ctns., c.l. ..... lb. .39 - —
ctns., l.c.l. ..... lb. .40 - .44
Aluminum sulfate, coml., grd., bgs. c.l., works, frt. equald ton. 41.00 - —
bulk, c.l., same basis ..... ton. 40.00 - —
lump, bgs., c.l., same basis ton. 44.00 - —
iron-free, bgs., c.l., works, frt. equald 100 lbs. 3.80 - —
bgs., l.c.l., works, frt. equald. 100 lbs. 4.30 - 8.30
USP, gran., 400-lb. dm., works. lb. .30 - —
USP, powd., dms., works ..... lb. .27 - —
Aluminum sulfate prices $1 per ton higher in the South.
Aluminum trihydrate, heavy (see Aluminum hydrate, heavy).
Ambergris, gray, bots ..... oz. 6.50 - 10.00
P-Aminoacetanilide, tech., paste, dms., frt. alld lb. 1.57 - —
Aminoacetic acid, NF, bbls., frt. adjusted lb. 1.35 - 1.60
Aminoazotoluene base, bbls., 100% basis lb. 1.03 - 1.18
p-Aminobenzoic acid, tech., dry, dms., works lb. 1.72 - —
2-Amino-4-chlorophenol, tech., solid, dms., frt. alld lb. 8.10 - —
p-Aminodiphenylamine, tech., solid, dms., frt. alld lb. 3.00 - —
Aminoethyl ethanolamine, dms., c.l., dlvd lb. .475 - —
dms., l.c.l., dlvd ..... lb. .49 - —
tanks, dlvd. ..... lb. .45 - —
2-Amino-2-methyl-1-propanol, dms., c.l., frt. alld lb. .44 - —
dms., l.c.l., frt. alld. ..... lb. .45 - —
tanks, frt. alld. ..... lb. .42 - —
m-Aminophenol, dist., dms., ton lots. lb. 2.05 - —
dms., smaller lots. ..... lbs. 2.50 - —
p-Aminophenol, dms., frt. alld. lb. 1.15 - —
Aminophylline, USP, 100-lb. dm., frt. alld lb. 3.25 - —
p-Aminosalicylic acid, dms., 100 lbs. or more, frt. adjusted lb. 3.40 - —
Ammonia, anhyd., fertilizer, tanks, works, frt. equald, E. of Rockies ton. 84.00 - —
refrigeration, tanks, works, frt. equald, E. of Rockies ton. 94.50 - —
Aqueous, 29.4%, tanks, works, anhyd. basis, E. of Rockies. ton. 95.00 - —
Ammoniacal liquor (see Ammonia, aqueous).
Ammoniac, sal., gray, bgs., c.l., works, frt. equald 100 lbs. 8.25 - —
bgs., l.c.l., same basis 100 lbs. 8.65 - 12.65
Ammoniac, sal., white (see Ammonium chloride, tech.)
Ammonium acetate, purif., dms lb. .40 - —
Ammonium benzoate, USP, fib. dms. ton lots, works lb. 1.00 - —
fib dms. 1,000-lb. lots, works. lb. 1.05 - —
Ammonium biborate, gran., dms., c.l., works ton. 325 - —
dms., ton lots, ex whse. 100 lbs. 20.40 - —
dms., smaller lots, ex whse. 100 lbs 21.15 - —
Ammonium bicarbonate, dom., dms., c.l., works 100 lbs. 7.00 - —
dms., l.c.l., works ..... 100 lbs. 9.00 - —

## Abbreviations

### Used in OPD Market Quotations

| | | | | | |
|---|---|---|---|---|---|
| alld. | allowed | distr. | distributor | No. | number |
| amorph. | amorphous | djns. | demijohns | nom. | nominal |
| AMP | American melting point | dlvd. | delivered | o- | ortho |
| | | dms. | drums | ord. | ordinary |
| anhyd. | anhydrous | dom. | domestic | oz. | ounce |
| AOAC | Association of Official Agricultural Chemists | E. | east | p- | para |
| | | e.p. | end point | Pac. | Pacific |
| | | equald. | equalized | pf. | proof |
| a.p.a. | available phosphoric acid | exp. | expressed | phos. | phosphate |
| | | Ext. | external | photo. | photographic |
| approx. | approximately | F. | fahrenheit | pkgs. | packages |
| artif. | artificial | ferment. | fermentation | powd. | powdered |
| ASTM | American Society for Testing Materials | f.f.a. | free fatty acid | precip. | precipitated |
| | | f.f.c. | free from chlorine | prod. | producer |
| | | fib. | fiber | pt. | point |
| Atl. | Atlantic | f.o.b. | free on board | pulv. | pulverized |
| Be. | Baume | f.p.a. | free of prussic acid | purif. | purified |
| bbls. | barrels | frt. | freight | redist. | redistilled |
| bgs. | bags | gal. | gallon | refd. | refined |
| bls. | bales | gran. | granular | refy. | refinery |
| bots. | bottles | grd. | ground | reg. | regular |
| b.p. | boiling point | i.&a. | iron and aluminum | resub. | resublimed |
| b.p.l. | bone phosphate of lime | | | ret. | returnable |
| b.r. | boiling range | i.b.p. | initial boiling point | SD | specially denatured |
| bxs. | boxes | imp. | imported | s.d. | single distilled |
| C. | centigrade | incl. | included | S E. | southeast |
| cbys. | carboys | indust. | industrial | sec. | secondary |
| CD | completely denatured | kgs. | kegs | secs. | seconds |
| | | l- | laevo | s.g. | specific gravity |
| c.i.f. | cost, insurance, freight | lacq. | lacquer | shipt. | shipment |
| | | lb. | pound | soln. | solution |
| cks. | casks | l.c.l. | less carlots | s.u. | standard unit |
| c.l. | carlots | l.t.l. | less truckload | syn. | synthetic |
| cns. | cans | liq. | liquid | tanks. | railroad tankcars |
| coml. | commercial | mfrs. | manufacturers | tech. | technical |
| conc. | concentrated | m- | meta | tert- | tertiary |
| CP | chemically pure | m.a.p. | mixed aniline point | t.l. | truckloads |
| cps. | centipoises | | | t.w. | tankwagons |
| cryst. | crystalline | min. | minimum | USP | U. S. Pharmacopoeia |
| cs. | cases | m.p. | melting point | | |
| ctns. | cartons | N- | nitrogen | vis. | viscosity |
| cyls. | cylinders | n- | normal | VM&P | varnish makers & painters |
| d- | dextro | nat. | natural | | |
| dbl. | double | neut. | neutral | W. | west |
| denat. | denatured | NF | National Formulary | whse. | warehouse |
| dest-dist. | destructively—distilled | NNR | New and Nonofficial Remedies | w.w. | water-white |
| dl- | dextro-laevo | | | | |
| dist. | distilled | | | | |

A unit-ton is 2,000 pounds of 1 percent of the basic constituent or other standard of the material. The percentage figure of the basic constituent multiplied by the price figure shown gives the price of 2,000 pounds of the material.

Ammonium bichromate, dms., works lb. .42 - .43
Ammonium bifluoride, dms., dlvd lb. .2145- .2245
Ammonium bromide, NF, gran., dms., c.l., t.l., frt. equald lb. .44 - —
dms., l.c.l., same basis lb. .46 - —
Ammonium carbonate, USP, lump, dms., c.l lb. .15½- —
Ammonium chloride, white, tech., fine gran., bgs., c.l., works. 100 lbs. 6.00 - —
bgs., l.c.l., works 100 lbs. 8.00 - 8.45
USP, gran., 250-lb dm lb. .17¼- —
Ammonium citrate, dibasic, 250-lb. dm, f.o.b. works lb. .77 - —
Ammonium dichromate (see Ammonium bichromate)
Ammonium fluoride (see Ammonium bifluoride)
Ammonium gluconate, tech., 200-lb. dm., f.o.b. works E lb. .45 - —
Ammonium hydroxide (see Ammonia aqeous).
Ammonium iodide, NF, 25-lb. jar, f.o.b. works lb. 4.26 - —
Ammonium lauryl sulfate, dms., c.l., frt. alld lb. .20½- —
dms., t.t.l., frt. alld lb .21½- —
tanks, frt. alld lb. .19½- —
Ammonium lignin sulfonate, bgs., c.l., works 100 lbs. 3.25 - —
bgs., l.c.l., works 100 lbs. 3.40 - 3.65
Ammonium linoleate, 80%, dms., works lb. .50 - .55
Ammonium molybdate, CP, cryst., 400- lb dms., 15,000-lbs. works. lb. 1.22 - —
400-lb dms., 2,000-lb. contracts, works lb 1.23 - —
400-lb. dms., works lb. 1.24 - —
Ammonium nitrate, dom., fertilizer grade, 33.5% N. bgs., f.o.b. works ton.64.00 - —
with dolomite, 20.5% N, bgs., c.l., Hopewell, Va ton.48.00 - —
Imp., Canadian, 33.5% N, eastern, bgs., c.l., ship't point, frt. equald to $3 ton base price ton.64.00 - —
Ammonium oxalate, tech., fine gran., 250-lb. dm., f.o.b. works E lb. .28½- —
Tech., powd., 200-lb. dm., same basis lb. .28½- —
Ammonium pentaborate, gran., bgs., c.l., works ton.193.00 - —
bgs., ton lots, ex whse 100 lbs.14.23 - —
bgs., smaller lots, ex whse 100 lbs.15.48 -17.48
Ammonium pentaborate powder $10 per ton higher in bags.
Ammonium persulfate, tech., dms., 10-ton lots or more, works lb. .18 - —
dms., smaller lots, works lb. .20 - .23
Ammonium phosphate, comi., bgs., c.l., works, frt. equald lb. .09¼- —
bgs., l.c.l., same basis lb. .10 - —
Dibasic, NF, V, bbls., dms lb. .46 - —
Dibasic, tech., bgs., c.l., works, frt. alld lb. .09¼- —
Ammonium silicofluoride, dms., works lb. .12¼- .13¾
Ammonium sulfamate, bgs., c.l., t.l., works lb. .19 - —
bgs., l.c.l., works lb. .20½- .27
Ammonium sulfate, standard granular, bulk, f.o.b. works, base price ton.32.00 - —
Ammonium sulfate, standard, gran., purif., c.l., 100-lb. bgs., f.o.b. works lb. .08½- —
Large granular, bulk, c.l., works ton.35.00 - —
bgs., c.l., works ton 40.00 - —
Tech., bulk, c.l., t.l., works ton.52.00 - —
bgs., c.l., t.l., works ton.56.00 - —
bgs., l.c.l., t.t.l., works 100 lbs. 3.20 - 5.20
Ammonium sulfide, liq., 40-44%, tanks, frt. equaid., 100% basis. ton.160.00 - —
Ammonium sulfocyanide, tech. (see Ammonium thiocyanate).
Ammonium thiocyanate, tech. cryst., dms., c.l., works lb. .20 - —
dms., l.c.l., works lb. .22 .26
Tech. soln., 50%, tanks, frt. equald., basis ammonium thiocyanate content lb. .17¼- —
Ammonium thioglycolate, comi., 55-gal. dms., ton lots, 100% basis lb 1.15 - —
d-Amphetamine hydrochloride, monobasic. dms lb.17.50 -23.50
dl-Amphetamine hydrochloride, dibasic. dms lb 4.50 - 6.00
d-Amphetamine phosphate, fib. dms., 100-lb. lots lb.15.00 - —
dl-Amphetamine phosphate, dms.lb. 4.20 - 5.60
d-Amphetamine sulfate, fib. dms. lb.15.00 -17.00
dl-Amphetamine sulfate, fib. dms., lb. 4.20 - 5.60
Amyl acetate, ex fusel oil, tech., dist., from 125° to 150°C., dms., c.l., frt alld. E. of Rockies lb. .18½- .19
dms., l.c.l., same basis lb. .20 - .20½
tanks, same basis lb. .16 - .16½
Amyl acetate, ex pentane, reg., dms., c.l., dlvd lb. .19 - —
ams., l.c.l., dlvd. lb. .21½- —
tanks, dlvd. lb. .16½- —
tech., dms., c.l., dlvd. lb. .17 - —
dms., l.c.l., dlvd. lb. .18½- —
tanks, dlvd. lb. .14½- —
Amyl acetate, syn., oxo process, dms., c.l., dlvd lb. .19 - —
dms., c.l., dlvd. lb. .20½- —
tanks, dlvd. lb. .16½- —
Amyl alcohol, ex fusel oil (see Fusel oil refd).
Amyl alcohol, ferment, refd., 128°-132°C., dms., l.c.l., dlvd lb. .43½- —
refd., ACS grade, dms., l.c.l., dlvd lb. .45½- —
ex pentane, mixed amyls, dms., c.l., frt. alld lb. .19 - —
dms., l.c.l., frt. alld lb. .20½- —
tanks, frt. alld. lb. .16½- —
Amyl alcohol, primary, dms., c.l., frt. alld lb. .20¼- —
dms., l.c.l., frt. alld lb. .21¾- —
tanks, frt. alld lb. .17¾- —
Sec-synthetic, dms., c.l., works, frt. alld lb. .19 - —
dms., l.c.l., same basis lb. .20½- —
tanks, same basis lb. .17 - —
Tert-synthetic, dms., c.l., frt. alld. E lb. .17 - —
dms., l.c.l., frt. alld. E. lb. .18½- —
tanks, frt. alld E. lb. .14½- —
Amyl alcohol, 1-pentanol (syn. normal), dms., c.l., works lb. .41½- —
dms., l.c.l., works lb. .43 - —
tanks, works lb. .39½- —
2-pentanol, dms., c.l., works lb. .65 - —
dms., l.c.l., works lb. .70 - —
tanks, works lb. .60 - —
Amyl n-butyrate, dms. lb. 1.00 - 1.25
Amyl cinnamic aldehyde, dms lb. 1.70 - 2.20
p-tert Amyl phenol, dms., c.l., works. lb. .26¾- —
dms., l.c.l., works lb. .27¾- —
Amyl salicylate, cns., dms. lb. .71 - —
Amyris oil, cms. lb. 1.75 - —
Anethol, tech., dms. lb. .80 - .92
USP, cns., dms. lb. 1.05 - —
Angelica root, bls lb. .85 - .90
Angelica root oil, bots lb.120.00 -140.00
Angelica seed oil, bots lb.120.00 -130.00
Aniline dms., c.l., frt. alld lb. .20 - —
dms., l.c.l., frt. alld. lb. .21 - —
tanks, frt. alld. lb. .18 - —
Aniline oil (see Aniline).
Aniline salt, dms., c.l., t.l., 20,000 lbs. min., frt. alld lb. .33 - —
dms., l.c.l., same basis lb. .35 - —
Anise oil, USP, dms. lb. 1.75 - 3.00
Anise seed, Mexican, bgs lb. .24 - —
Spanish, bgs. lb. .24 - —
Anisic aldehyde, dms lb. 1.50 - 2.20
o-Anisidine, dms., c.l., frt. alld lb. .80 - —
dms., l.c.l., same basis lb. .82 - —
tanks, same basis lb. .78 - —
p-Anisidine, dms., works lb. .97 - —
Anthracene, 90-95%, dms., c.l., t.l. f.o.b., works lb. .42½- —
dms., l.c.l., minimum shipment 1,000 lbs., same basis lb. .45 - —
Anthranilic acid, 99%, 150-lb. dms., dlvd lb. 1.15 - —
Anthraquinone, 99.5%, bbls., c.l., frt alld lb. .83 - —
bbls., l.c.l., same basis lb. .86 - —
Electrical grade, bbls., l.c.l., same basis lb. 1.10 - —
Antimony butter (see Antimony trichloride).
Antimony metal, bulk, c.l., mines. lb. .29 - —
cs., c.l., mines lb. .29½- —
Antimony oxide, bgs., c.l., frt. alld. lb. .26½- —
bgs., l.c.l., frt. alld. lb. .28 - —
Prices of antimony oxide are 2% higher west of the Rockies.
Antimony sulfide, approx. 65%, bgs., 10,000-lb. lots, dlvd lb. .23 - —
bgs., smaller lots, dlvd lb. .24 - .26
Antimony trichloride, anhyd., solid, pails, c.l., works lb. .41 - —
pails, l.c.l., works lb. .43 - —
Antimony-potassium tartrate, tech., powd., 250-lb., dm., f.o.b. works, E lb. .69½- —
USP, powd., 250-lb. dm., same basis lb. .74½- —
Apomorphine hydrochloride, USP, bots., 25-oz. lots oz.35.60 - —
Apricot kernel oil, USP, dms lb. .55 - .70
Arabic gum, amber sorts, 10 bgs. lb. .27 - —
USP, powd., bbls lb. .31 - .34
Areca nuts, powd., bbls. lb. .13 - —
Arecoline hydrobromide, NF, bots., tins, 100 oz. or more oz. 4.00 - —
1-Arginine, free base, dms., 10-kilo lots or more kilo.90.00 - —
1-Arginine glutamate, dms., 10-kilo lots or more kilo.60.00 - —
1-Arginine monohydrochloride, dms., 10-kilo lots or more kilo.60.00 - —
Arnica flowers (true Montana), bls. lb. .75 - —
Aromatic petroleum solvents (see Solvent Naphtha, petroleum, aromatic).
Arsenic, crude (95%), bulk, c.l., works lb. .016 - —
bbls., c.l., works lb. .0.31 - —
Arsenic trioxide, NF, powd., dms., 300-lbs., f.o.b. works lb. .48 - —
Arsenic, white, powd., bbls., c.l., works lb. .04½- —
bbls., l.c.l. works lb. .06½- .07½
Arsenous acid, tech. (see Arsenic, white).
Arsenous acid, USP (see Arsenic trioxide).
Arylid maroons, deep shades, bbls. lb. 3.70 - —
Light shades, bbls. lb. 2.85 - —
Asafetida gum, cns lb. .36 - .40
Powd., bbls., dms lb. .75 - .80
Asbestine (see Talc, fibrous, New York).
Asbestos, Canadian crude
6D, c.l. (30 tons), mines ton.86.00 - —
7D, c.l (30 tons), mines ton.75.00 - —
7F, c.l (30 tons), mines ton.71.00 - —
7H, c.l (30 tons), mines ton.61.00 - —
7K, c.l. (30 tons), mines ton.50.00 - —
7M, c.l. (30 tons), mines ton.44.00 - —
7R, c.l. (30 tons), mines ton.43.00 - —
7RF, c.l. (30 tons), mines ton.44.00 - —
7T, c.l. (30 tons), mines ton.41.00 - —
7TF, c.l. (30 tons), mines ton.44.00 - —
Asbestos prices are in Canadian funds; l.c.l. lots $$ per ton higher.
Ascorbic acid, USP, dms., 100-kilos. kilo. 7.35 - —
dms., less than 100-kilos kilo.7.75 - —
Ash, black (see Barium sulfide).
Asphalt, gilsonite, black jet, bgs., c.l., mines ton.43.50 - —
ex-whse, 5 tons or more, N. Y., N. J ton.89.50 - —
select, brilliant black, 340°-360°F. fusing pt., bgs., c.l., mines. ton.46.00 - —
270°-295°F. fusing pt., bgs., c.l., mines ton.43.00 - —
Asphalt, petroleum, cut-back, tanks, tankwagon, refy gal. .09½- —
emulsion, tanks, tankwagon, refy. gal. .09½- —
steam-refd., 50-80 penetration, tanks, tankwagon, refy. ton.21.00 - —
85-300 penetration, tanks, tankwagon, refy ton.20.00 - —
Aspirin (see Acetylsalicylic Acid).
Atropine, NF, tins oz. 5.75 - 7.50
Atropine sulfate USP, bots oz. 5.25 - 5.75
Azelaic acid, bgs., c.l., dlvd. lb. .40 - —
bgs., ton lots, same basis lb. .41 - —

## B

Bacitracin, bulk, 1,000,000,000 or more units 50,000 units. .65 - —
less than 1,000,000,000 units. 50,000 units. .70 - —
Balm of Gilead buds, dried, bgs lb. 1.25 - 1.35
Barberry root bark, bgs lb. 1.00 - 1.10
Barbital, NF, 100-lb. dms., f.o.b. works lb. 4.50 - —
Barbital sodium, NF, 100-lb. dms. lb. 4.75 - —
Barium carbonate, precip., bgs., c.l., works ton.111.50 - —
bgs., smaller lots, works ton.126.50 - —
Barium chlorate, dms., works lb. .32 - .41
Barium chloride, anhyd., bgs., c.l., works ton.176.00 - —
bgs., l.c.l., works ton.196.00 - —
NF, cryst., dms., 400-lbs., works.lb. .23 - —
Tech., cryst., bgs., c.l., works. 100 lbs. 7.00 - —
bgs., l.c.l., works 100 lbs. 8.00 - —
Barium chromate, bgs., frt. equaid. lb. .38 - —
Barium dioxide (see Barium peroxide).
Barium hydrate, cryst., bgs., c.l., t.l., frt. equald ton.208.00 - —
bgs., l.c.l., t.l., frt equald ton.218.00 - —
Barium monohydrate, 99%, bgs., c.l., frt. equald 100 lbs.11.25 - —
bgs., l.c.l., frt. equald 100 lbs.11.75 - —
Barium monoxide (see Barium oxide).
Barium nitrate, bbls., c.l., t.l., dlvd lb. .16 - —
bbls., l.c.l., t.t.l., dlvd. lb. .17 - —
Barium oxide, grd., dms., c.l., t.l., frt equald. ton275.00 - —
dms., l.c.l., t.t.l., frt. equald. ton.285.00 - —
Barium peroxide, dms., frt. equald. lb .20 - —
Barium stearate, ctns., c.l., frt. alld. lb. .41 - —
ctns., l.c.l, same basis lb. .42 - .46
Barium sulfate, tech. (see Barytes and blanc fixe).
Barium sulfate, X-ray, 100-lb. dm. lb. .19½- —
Barium sulfide, dms., c.l., works. ton.100.00 - —
dms., l.c.l., works ton.110.00 - —
Barytes, southern, off-color, bgs., mines ton.30.00 - —
95-75%, bgs., mines ton.30.00 - —
white, water-grd., paper bgs., c.l., St. Louis ton.60.00 -60.25
paper bgs., ex wrse, New York ton 84.85 - —
Battery acid, cbys., c.l., works E. 100 lbs. 2.35 - —
cbys, l.c.l., works, E 100 lbs. 2.65 -10.95
Bauxite, bulk, mines ton. 7.00 -10.00
Bay oil, NF, Puerto Rican, 50-55%, c..s lb. 2.40 - 2.70
55-60%, cns. lb. 2.55 - —
NF, West Indian, 50-55%, cns. dms lb. 2.50 - —
Bayberry wax, bgs lb. .65 - .70
Beeswax, crude, African, bgs lb. .52 - .54
Brazilian, bgs. lb. .55 - .56
Central American, bgs lb. .53 - —
Chilean, bgs. lb. .56 - —
Refd., USP, bleached white, bricks, 100-lb. ctns lb. .69 - .71
white, slabs, 100-lb. ctns lb. .68 - .70
yellow, bricks, 100-lb. ctns lb. .59 - .61
yellow, slabs, 100-lb. ctns lb. .58 - .60
Belladonna leaf, bls. lb. .24 - .26
Belladonna root, bls. lb. .28 - .35
Bentonite, dom. 200 mesh, bgs., c.l., mines ton.14.00 - —
Imp. Italian, white, high gel., bgs., 5-ton lots, ex whse ton.95.20 - —
bgs., 1-ton lots, ex whse ton.99.00 - —
Imp. Italian, white, low gel., bgs., 5-ton lots, ex whse ton.93.40 - —
bgs., 1-ton lots, ex whse ton.97.16 - —
Benzal chloride, cbys., works lb. .44 - —
Benzaldehyde, NF, dms lb. .80 - 1.05
Tech., dms., c.l., t.l. lb. .47 - —
dms., l.c.l. lb. .48 - —
Benzene, pure or nitration, tanks, works:
Bethlehem, Pa gal. .34 - —
Birmingham district gal. .34 - —
Chicago district gal. .34 - —
Cleveland district gal. .34 - —
Geneva, Utah gal. .34 - —
Houston, Tex. gal. .34 - .40
Johnstown, Pa gal. .34 - —
Benzene, pure or nitration, tanks, works:
Lackawanna, N. Y. gal. .34 - —
Lone Star, Tex gal. .34 - —
Lorain, Ohio gal. .34 - —
Middletown, Ohio gal. .34 - —
Mennequa, Colo. gal. .34 - —
Philadelphia district gal. .34 - —
Pittsburgh district gal. .34 - —
Sparrows Point, Md. gal. .34 - —
Syracuse, N. Y. gal. .34 - —
Terre Haute, Ind gal. .34 - —
Youngstown, Ohio gal. .34 - —
Benzene hexachloride, 25% and 99% gamma isomer (see Lindane).
Benzene hexachloride, tech., high gamma, bgs., c.l., t.l., consignment, dlvd. gamma-unit. .0075 —
bgs., c.l., t.l., direct sale, f.o.b. works gamma-unit. .0065- —
Tech., low gamma, bgs., c.l., t.l., consignment, dlvd gamma-unit. .0075- —
bgs., c.l., t.l., direct sale, f.o.b. works gamma-unit. .0056- —
Benzidine hydrochloride, bbls., c.l., frt. alld., 100% basis lb. 1.19 - —
bbls., l.c.l., same basis lb. 1.21 - —
Benzidine sulfate, tech., bbls., frt. alld., 100% basis lb. 1.21 - —
Benzidine yellow, AAA, bbls., dlvd. lb. 2.20 - —
AAOT, bbls., dlvd. lb. 2.55 - —
Lightfast, bbls., dlvd. lb. 3.40 - —
Benzocaine, dms., 100-lbs., frt. alld. lb. 3.25 - —
Benzoic acid, tech., dms., c.l., t.l., frt. alld lb. .25 - .37
dms., l.t.l., same basis lb. .29 - .41
tanks, same basis lb. .21 - —
USP, bbls., dms., ton lots lb. .48 - —
bbls., dms., 1,000-lb lots lb. .50 - —

### BENZOL

**Benzol quotations, both coaltar and petroleum, may be found under Benzene.**

Benzoin gum, Sumatra, cs. lb. .32 - —
Benzophenone, dms. lb. 1.40 - 1.65
Benzotriazole, tech., dms., 1,000-lb. lots, works lb. 2.25 - —
Benzotrichloride, cbys., 1,000-lb. lots or more, frt. equald.lb. .21 - —
cbys., smaller lots, frt. equald lb. .23 - —
Benzoyl chloride, cbys., dms., c.l., works, frt. equald lb. .22 - —
cbys., l.c.l., same basis lb. .23 - —
tanktrucks, dlvd. Metropolitan area lb. .21 - —
Benzoyl peroxide, purif., fib. dms., 50 to 1,000-lb lots, works lb. .93 - 1.08
Benzyl acetate, f.f.c., cns., dms lb. .54 - —
Benzyl alcohol, NF, dms. lb. .54 - —
Tech., dms., dlvd. lb. .47½- .65
Benzyl benzoate, USP, 40-lb. dms lb. .64 - —
Benzyl chloride, tech., cbys., dms., c.l., works, frt equald lb. .22½- .25½
cbys., dms., l.c.l., same basis lb. .23½- .25½
tanktrucks, dlvd. Metropolitan area lb. .21 - —
A 2½c. differential is quoted on benzyl chloride in 5-gal. cbys. In steel dms. prices are ½c. lower.
Benzyl cinnamate, cns. lb 3.30 - 3.60
N-Benzyl-N,N-dimethylamine, 50 dms., frt. alld lb. 1.25 - —
12-49 dms., same basis lb. 1.35 - —
1-11 dms., same basis lb. 1.90 - —
Benzyl formate, cns. lb. 1.85 - 2.10
Benzyl isoeugenol, cns lb. 9.25 - —
Benzyl propionate, bots. lb. 1.35 - 1.65
Benzyl salicylate, bots lb. 1.50 - 1.85
Benzylidine acetone, bots. lb. 1.75 - 1.80
Benzylidine chloride (see Benzal chloride).
Berberine bisulfate, cns lb.56.50 - —
Berberine hydrochloride, bots lb.56.50 - —
Bergamot oil, nat., NF, Italian, cns. lb.11.00 -12.00
Betagammapicoline (see b,g-Picoline).
Betahydroxynaphthoic acid (see b-Oxynaphthoic acid).
Betamethylnaphtalene (see Methylnaphthalene).
Betanaphthol (see b-Naphthol).
Betanaphthylamine (see b-Naphtholamine).
Betaoxynaphthoic acid (see b-Oxynaphthoic acid).
Betaphenylethylamine (see b-Phenylethylamine).
BHC (see Benzene hexachloride, tech.).
Biotin, cryst., bots gram.10.00 - —
Biphenyl (see Diphenyl).
Birchtar oil, crude, cns lb. 1.50 - 1.90
Rectified, cns. lb. 1.75 - 2.00
Bismuth chloride, jars lb. 5.11 - —
Bismuth hydroxide, dms lb. 4.60 - 4.68
Bismuth metal, bxs., ton lots lb. 2.25 - —
Bismuth nitrate, cryst., 250-lb. dm. lb. 2.25 - —
Bismuth oxychloride, 25-lb. dm., f.o.b. works lb. 4.42 - —
Bismuth subcarbonate, USP, 150-lb. dm lb. 3.70 - —
Bismuth subgallate, NF, 200-lb. dm., f.o.b. works lb. 4.43 - —
Bismuth subiodide, fib dms lb. 5.37 - —
Bismuth subnitrate, NF, 200-lb. dm., f.o.b. works lb. 3.15 - —
Bismuth subsalicylate, USP, 100-lb. dm., f.o.b. works lb. 4.25 - —
Bismuth trioxide, 100-lb. dms., f.o.b. works lb. 4.40 - —
Bismuth-ammonium citrate, USP, powd., jars lb. 4.22 - —
Bisphenol-A bgs., c.l., t.l., single shipt., 70,000-lbs. or more, frt. alld lb. .29½- —
bgs., c.l., t.l., less than 70,000 lbs., same basis lb. .30 - —
bgs., l.c.l., same basis lb. .31 - —
Blackberry root bark, bls lb. .50 - .55

### BLACK PIGMENTS

**Black pigment quotations are listed individually. For example, prices on Black, acetylene, may be found in the A's under Acetylene black.**

Blanc fixe, direct process, bgs., c.l., works ton.160.00 - —
bgs., l.c.l., works ton.170.00 - —
bgs., l.c.l., New York whse ton.200.00 - —
Blood, dried, 16-16½% ammonia, bgs., New York unit-ton. 5.50 - —
Bloodroot, bls. lb. .75 - .80

### BLUE PIGMENTS

**Blue pigment quotations are listed individually. For example, prices on Blue, ultramarine, may be found in the U's under Ultramarine blue.**

Blue dyes (see Dyes)
Blue vitriol (see Copper sulfate)
Bois de rose oil, Brazilian, dms lb. 2.10 - —
Peruvian, dms. lb. 1.70 - —
BON acid maroons, pure, bbls lb. 1.75 - —
Resinated, bbls. lb. 1.50 - —
Bone black, dms., c.l., frt. alld lb. .1750- .2225
l.c.l., works lb. .1950- .2425
Pacific coast bone black prices 3¼c. per lb. higher.
Bonemeal, steamed works, E ton 80.00 - —
Bone phosphate, defluorinated or lime (see Defluorinated phosphate).
Bone phosphate precip. (see Calcium phosphate, tribasic).
Borax, tech., anhyd., 99½%, bgs., c.l., works ton.92.00 - —
bgs., ton lots, ex whse, New York or Chicago 100 lbs. 7.42 - —
bgs., smaller lots, same basis 100 lbs. 8.67 -10.67
bulk, c.l., works ton.83.00 - —
Borax, tech., gran., decahydrate, 99½%, bgs., c.l., works. ton.50.00 - —
bgs., ton lots, ex whse, New York or Chicago 100 lbs. 5.32 - —
bgs., smaller lots, same basis. 100 lbs. 6.57 - 8.57
bulk, c.l., works ton.43.50 - —
pentahydrate, 99½%, bgs., c.l., works ton.64.50 - —
bgs., ton lots, ex whse, New York or Chicago 100 lbs. 6.05 - —
bgs., smaller lots, same basis 100 lbs. 7.30 - 9.30
bulk, c.l., works ton.58.00 - —
USP, powd., bgs., c.l., works. ton.54.00 - —
bgs., ton lots, ex whse, New York or Chicago 100 lbs. 6.45 - —
bgs., smaller lots, same basis. 100 lbs. 7.70 - 9.70
Bordeaux powder, tribasic, bgs., c.l., dlvd lb. .24 - —
bgs., l.c.l., same basis lb. .26 - —
Boric acid, tech., anhyd., 99.9%, bgs., c.l., works ton.335.00 - —
bgs., ton lots, ex whse, New York or Chicago 100 lbs.19.62 - —
bgs., smaller lots, same basis. 100 lbs.20.87 -22.87
cryst., 99.9%, bgs., c.l., works. ton.163.50 - —
bgs., ton lots, ex whse, New York or Chicago 100 lbs.11.05 - —
bgs., smaller lots, same basis. 100 lbs.12.30 -14.30
Boric acid, tech., cryst., 99.9%, dms., c.l., works ton.188.50 - —
dms., ton lots, ex whse., New York or Chicago. 100 lbs.12.30 - —
bgs., smaller lots, same basis 100 lbs.13.05 - —
gran., 99.9%, bgs., c.l., works. ton.112.00 - —
bgs., ton lots, ex whse, New York or Chicago 100 lbs. 8.47 - —
bgs., smaller lots, same basis. ton.174.25 - —
dms., c.l., works ton.137.00 - —
dms., ton lots, ex whse, New York or Chicago 100 lbs. 9.72 - —
dms., smaller lots, same basis 100 lbs.10.47 - —
bulk, c.l., works ton.106.00 - —
powd., bgs., ton lots, ex whse., New York or Chicago. 100 lbs. 8.85 - —
bgs., smaller lots, same basis 100 lbs.10.10 -12.10
Boric acid, powd., dms., smaller lots, same basis 100 lbs.11.45 - —
USP boric acid $25 per ton higher in bags.
Borneol, cns. lb. 2.75 - —
Boron trichloride, CP, 1,800-lb. cyls., works lb. 1.25 - —
100-lb. cyls., works lb. 1.70 - —
Boron trifluoride, gas, cyls., t.l., works lb. .70 - —
cyls., l.t.l., works lb. .70 - —
Brimstone (see Sulfur).
Broenner's acid, bbls lb. 1.53 - —
Bromine, purif., cs., c.l., t.l., dlvd. E. of Rockies lb. .32 - —
cs., l.c.l., same basis lb. .34 - .39
ret. dms., c.l., t.l., dlvd. E. of Rockies lb. .31 - —
ret. dms., l.c.l., same basis lb. .31 - .34
tanks, same basis lb. .21½- —
Bromochloromethane, dms., c.l., frt. equald lb. .48 - —
dms., l.c.l., same basis lb. .50 - —
tanks, same basis lb. .47 - —
Bromoform, pharmaceutical grade, 100-lb. cbys lb. 1.80 - 1.90
Bromstyrol, bots. lb. 5.35 - 5.70
Brucine, cns oz. Nominal.
Brucine sulfate, NF, cns. lb. 1.45 - 1.75
Buchu leaves, bbls. lb. .70 - .75

### BROWN PIGMENTS

**Brown pigment quotations are listed individually. For example, prices on Brown, iron oxide, may be found in the I's under Iron oxide brown.**

| | | | |
|---|---|---|---|
| Butadiene, refd. cyls., c.l., refy. | lb. | .21 | — |
| cyls., l.c.l., refy. | lb. | .22 | — |
| tanks, dlvd. | lb. | .14½- | — |
| Butene-1, tanks, works | lb. | .0625- | — |
| Butene-2, tanks, works | lb. | .0570- | — |
| n-Butyl acetate, ferment, dms., c.l., frt. alld. | lb. | .17 | — |
| dms., l.c.l., same basis | lb. | .18½- | — |
| tanks, same basis | lb. | .14½- | — |
| Syn., dms., c.l., dlvd. E. | lb. | .17 | — |
| dms., l.c.l., same basis | lb. | .18½- | — |
| tanks, same basis | lb. | .14½- | — |
| sec-Butyl acetate, syn., dms., c.l., dlvd. E. | lb. | .14¾- | — |
| dms., l.c.l., same basis | lb. | .16¼- | — |
| tanks, same basis | lb. | .12¼- | — |
| n-Butyl acrylate, dms., c.l. or t.l., straight or mixed frt. alld. E. | lb. | .42½- | — |
| dms., l.t.l., same basis | lb. | .43½- | — |
| tanks, same basis | lb. | .40 | — |
| Prices of n-Butyl acrylate are 1c. per lb. higher in Ariz., Calif., Idaho, Nev., Ore., Utah and Wash. | | | |
| n-Butyl alcohol, ferment, dms., c.l., frt. alld. | lb. | .18 | — |
| dms., l.c.l., frt. alld. | lb. | .19½- | — |
| tanks, frt. alld. | lb. | .15½- | — |
| n-Butyl alcohol, syn., dms., c.l., dlvd. | lb. | .18 | — |
| dms., l.c.l., frt. alld. | lb. | .19½- | — |
| tanks, dlvd. | lb. | .15½- | — |
| Sec-synthetic, dms., c.l., dlvd. | lb. | .15 | — |
| dms., l.c.l., dlvd. | lb. | .16½- | — |
| tanks, dlvd. | lb. | .12½- | — |
| n-Butyl alcohol, tert-synthetic, dms., c.l., frt. alld., dlvd E. | lb. | .16 | — |
| dms., l.c.l., same basis | lb. | .17½- | — |
| tanks, same basis | lb. | .13½- | — |
| Butyl aldehyde (see Butyraldehyde). | | | |
| Butyl chloride, dms., c.l., works | lb. | .37½- | — |
| dms., l.c.l., works | lb. | .38¼- | — |
| n-Butyl ether, dms., c.l., works | lb. | .35¼- | — |
| dms., l.c.l., works | lb. | .36 | — |
| tanks, works | lb. | .33¼- | — |
| Butyl lactate, dms., c.l., frt. alld. E. Rockies | lb. | .42½- | — |
| dms., l.c.l., same basis | lb. | .43½- | — |
| tanks, same basis | lb. | .40 | — |
| Butyl laurate, dms., works | lb. | .37½- | — |
| Butyl methacrylate, dms., c.l., t.l., works | lb. | .53 | — |
| dms., l.c.l., works | lb. | .55½- | — |
| Butyl oleate, refd., dms., l.c.l., works | lb. | .32 | — |
| Butyl phenylacetate, dms. | lb. | 4.50 | 4.60 |
| Butyl phthalate (see Dibutyl phthalate). | | | |
| Butyl stearate, dms., c.l., frt. alld. E. of Mississippi | lb. | .27¼- | — |
| dms., l.c.l., same basis | lb. | .28¼- | — |
| Butylamine (see Mono-, Di- and Tri-butylamine). | | | |
| tert-Butylamine, dms., c.l., t.l., f.o.b. works | lb. | .47 | — |
| dms., l.c.l., same basis | lb. | .47½- | — |
| tc., t.t., same basis | lb. | .45 | — |
| Butylated hydroxyanisole, food grade, dms., dlvd. | lb. | 4.75 | — |
| 6-tert-Butyl-m-cresol (see Mono-tert-butyl-m-cresol). | | | |
| Butylated hydroxytoluene (see 2,6-Di-tert-butyl-p-cresol). | | | |
| 1,3-Butylene glycol, dms., c.l., t.l., dlvd. | lb. | .20½- | — |
| dms., l.c.l., l.t.l., f.o.b. works | lb. | .22 | — |
| tanks, dlvd. | lb. | .18 | — |
| p-tert-Butylphenol, bgs., c.l., dlvd., | lb. | .27½- | — |
| bgs., l.c.l., works | lb. | .28½- | — |
| Butyraldehyde, dms., c.l., dlvd. | lb. | .22 | — |
| dms., l.c.l., dlvd. | lb. | .23½- | — |
| tanks, dlvd. | lb. | .19½- | — |
| Butyric acid, 99%, dms., c.l., frt. equald. | lb. | .34 | — |
| dms., l.c.l., same basis | lb. | .34½- | — |
| tanks, same basis | lb. | .32½- | — |
| Butyric ether (see Ethyl butyrate). | | | |
| Butyrolactone, dms., c.l., t.l., works. | lb. | .40 | — |
| dms., l.c.l., same basis | lb. | .43 | — |

## C

| | | | |
|---|---|---|---|
| Cacao butter (see Cocoa butter). | | | |
| Cadmium CP red dark shade, bbls., frt. alld. E. of Rockies | lb. | 5.55 | — |
| Light shade, bbls., same basis | lb. | 4.65 | — |
| medium shade, bbls., same basis. | lb. | 5.30 | — |
| Medium light shade, bbls., same basis | lb. | 4.90 | — |
| Orange-red shade, bbls., same basis | lb. | 4.30 | — |
| Yellow, all shades, bbls., frt. alld. E. of Rockies | lb. | 2.85 | — |
| Cadmium iodide, 25-lb. fib. dms. | lb. | 6.75 | 7.00 |
| Cadmium metal, ingots or sticks, ton lots, cs., dlvd. | lb. | 1.30 | — |
| Cadmium-mercury lithopone orange, deep shade, bbls., frt. alld E. of Rockies | lb. | 1.65 | — |
| Cadmium-mercury lithopone red, dark shade, bbls., same basis | lb. | 1.95 | — |
| Red, light shade, bbls., same basis. | lb. | 1.72 | — |
| Red, medium shade, bbls., same basis | lb. | 1.87 | — |
| Red, medium light shade, bbls., same basis | lb. | 1.80 | — |
| Red, maroon shade, bbls., same basis | lb. | 2.03 | — |
| Cadmium-selenide lithopone maroon, bbls., frt. alld E. of Rockies | lb. | 2.76 | — |
| Orange, bbls., same basis | lb. | 1.58 | — |
| Cadmium-selenide lithopone red, orange-red shade, bbls., same basis | lb. | 1.72 | — |
| Red, dark shade, bbls., same basis. | lb. | 2.56 | — |
| Red, light shade, bbls., same basis. | lb. | 1.88 | — |
| Red, medium shade, bbls., same basis | lb. | 2.00 | — |
| Red, medium-light shade, bbls., same basis | lb. | 2.23 | — |
| Calmium-selenide lithopone, yellow, all shades, bbls., frt. alld. E. of Rockies | lb. | 1.19 | — |
| Caffeine, NF, citrated, dms., 100-lb. lots or more | lb. | 2.70 | — |
| USP, nat., cryst., anhyd., dms., 100-lb lots or more | lb. | 2.10 | — |
| Caffeine, USP, nat., cryst., hydrous, dms., 100-lb. lots or more. | lb. | 1.96 | — |
| USP, syn., anhyd., dms., 100-lb. lots or more | lb. | 2.10 | — |
| cryst., hydrous, dms., 100-lb. lots or more | lb. | 1.96 | — |
| Cajuput oil, native, cns. | lb. | 1.75 | 2.00 |
| Redist., USP, cns. | lb. | 1.90 | 2.10 |
| Calamine, USP, dms. | lb. | .34 | — |
| Calamus oil, bots. | lb. | 12.00 | 20.00 |
| Calciferol, cryst., 10-kilo or more lots, works | gram. | .54 | — |
| 1-10 kilo lots | gram. | .55 | — |
| Calciferol, in edible oil (see Viosterol). | | | |
| Calcium p-aminosalicylate trihydrate, fib, dms., 100 lbs. or more, frt. adjusted | lb. | 3.10 | — |
| Calcium arsenate, dealers, bgs., c.l., frt. alld. | lb. | .09 | .09¼ |
| bgs., l.c.l., same basis | lb. | .10 | .10¼ |
| Calcium bromide, NF, jars, 100 lbs. or more | lb. | .97 | — |


# Best detergent raw material for heavy-duty formulations

**Oronite's recent product and production achievement provides the detergent industry its best commercial source for a high molecular weight alkylbenzene. And ALKANE "60" can be sulfonated to the same quality as the best dodecylbenzenes. For complete information and technical data on new ALKANE "60" contact the Oronite office nearest you.**

**IMPROVED FOAM**—New ALKANE "60" minimizes the need for foam additives. In dishwashing foam tests results showed the ALKANE "60" based product, without a foam additive, performing as well as dodecylbenzene products which included a foam additive. And in washing machine foam tests ALKANE "60", without a foam additive, performed as well as a typical dodecylbenzene with an additive.

Formulation savings and processing advantages can be obtained by substitution of ALKANE "60" sulfonate for foam additive.

**BETTER DETERGENCY**—In the Terg-O-Tometer detergency test, ALKANE "60" based heavy-duty detergents proved to be better cleaning agents than dodecylbenzene derived products. The ALKANE "60" based product removed more soil at all concentrations—performed well in both soft and hard water.

**PROCESSING**—ALKANE "60" can be sulfonated and processed into finished detergents as easily as ALKANE "56", without manufacturing modification. Product results are comparable to the high sulfonation quality obtained with ALKANE "56".

**ORONITE CHEMICAL COMPANY**
A CALIFORNIA CHEMICAL COMPANY SUBSIDIARY
EXECUTIVE OFFICES • 200 Bush Street, San Francisco 20, California
SALES OFFICES • New York, Boston, Wilmington, Chicago, Cincinnati, Cleveland, Houston, Tulsa, Los Angeles, San Francisco, Seattle
FOREIGN AFFILIATE • California Chemical International, Inc., San Francisco, Geneva, Panama
6550

*ORONITE will continue to supply ALKANE "56", the standard of the detergent industry*

## Calcium Carbide—CMC

Calcium carbide, standard generator size, 600-lb. dms., c.l., dlvd ton. 149.00 - —
Calcium carbonate, nat., dry-grd., air floated, 325 mesh, bgs., c.l., works ton. 10.50 - —
Calcium carbonate, chalk, whiting, 325 mesh, bgs., c.l., works. ton. 32.00 - 34.00
water-grd., ½ to 10 microns, bgs., c.l., works ton. 30.00 - —
10 to 20 microns, bgs., c.l., works ton. 17.00 - 18.00
precip., dense, bgs., c.l., works. ton. 30.00 - 38.50
bgs., l.c.l., works ton. 45.00 - 53.50
medium, bgs. c.l., works ton. 38.00 - —
bgs., l.c.l., works ton. 48.00 - 53.00
Calcium Carbonate, surface treated, bgs., c.l., works ton. 42.00 - 44.00
bgs., l.c.l., works ton. 57.00 - 59.00
ultrafine, bgs., c.l., works. ton. 117.50 - 167.50
bgs., l.c.l., works ton. 137.50 - 187.50
Calcium chloride, conc., flake or pellet 94-97%, paper bgs., c.l. works, frt. equald. ton. 39.30 - —
Flake, 77-80%, paper bgs., c.l., works, frt. equald ton. 32.00 - —
Liquor, 40%, tanks, frt equald. ton. 12.50 - —
Powd., 77% min., paper bgs., c.l., works, frt equald ton. 37.00 - —
Purif., gran. dms lb. .27 - —
Calcium chloride, solid, 73-75%, dms., c.l., frt. equald ton. 29.50 - —
dms., l.c.l. works frt. equald. ton. 36.00 - 73.00
USP, gran., dms. lb. .32 - —
Calcium chromate, bgs., dlvd lb. .37 - —
Calcium cyanide dms., c.l., dlvd. E. of Rockies lb. .20 - —
dms., l.c.l. same basis lb. .24 - .55
Calcium cyclamate, 100-lb. dms lb. 1.95 - —
Calcium gluconate, USP, AA grade, 100-lb dm., ton lb. .73½- —
USP, powd., 100-lb. dm., ton lb. .66½- —
Calcium hydride, lump, dms., works. lb. 2.20 - 3.00
Calcium hypochlorite, high test, gran., 45-lb. cs., dlvd. E. of Rockies cs. 23.85 - 25.60
100-lb dms. same basis dm. 33.30 - 36.55
Calcium hypophosphite, dms., 1,000-lb. lots lb. 1.28 - —
Calcium iodide, jars lb. 4.52 - —
Calcium lactate, NF, dms., f.o.b. works lb. .43 - .46
Calcium mandelate, USP, 150-lb. dm., works lb. 3.25 - —
Calcium naphthenate, liq., 4% Ca., dms., frt equald lb. .30 - —
Calcium pantothenate, USP, jars, 1 kilo or more kilo. 35.00 - —
Calcium para-aminosalicylate (see Calcium p-aminosalicylate).
Calcium phenosulfonate, dms lb. 1.24 - 1.25
Calcium phosphate, dibasic, USP, bgs., c.l., frt equald 100 lbs. 16.00 - —
Dibasic, feed grade, 18½% P, bgs., c.l., t.l., frt. equald ton. 86.00 - —
bgs. c.l., t.l., f.o.b. Texas City works ton. 80.50 - —
bgs., l.c.l., frt equald ton. 96.00 - —
Dibasic, feed grade, 21% P., bgs., c.l., t.l., frt. equald ton. 97.65 - —
bgs., l.c.l., frt. equald ton. 107.65 - —

Prices of calcium phosphate dibasic in bulk $3 per ton less than bgs., c.l., prices.

Calcium phosphate, monobasic, bgs., 10,000-lb. lots, frt. equald. 100 lbs. 7.45 - —
bgs., smaller lots, same basis. 100 lbs. 7.95 - —
Tribasic, NF, precip., bgs., c.l., works, frt. equald 100 lbs. 9.25 - —
bgs., l.c.l., frt. equald. 100 lbs. 10.00 - —
Calcium propionate, any quantity, dms., dlvd. E. of Rockies. lb. .34½- —

Prices W. of Rockies 3c. per lb. more.

Calcium phytate, bgs., 50 lbs. or more f.o.b. warehouse N. Y. lb. .39 - —
Calcium resinate, precip., dms., ton lots frt. alld., works lb. .40¼- —
Calcium silicate hydrated, bgs., c.l., works lb. .06 - —
bgs., l.c.l., works lb. .06½- —
Calcium silicate paint grade (see Wollastonite).
Calcium stearate, ctns., c.l. lb. .39 - —
ctns., l.c.l. lb. .40 - .44
Calcium sulfate (see Gypsum).
Calomel, NF mild, powd., dms., 100-lbs., f.o.b. works lb. 4.32 - —
NF, mild, precip., dms., 100-lbs., f.o.b works lb. 5.67 - —
Camphene, 46° m.p., dms. incl., c.l., works lb. .15 - —
dms. incl., l.c.l. same basis lb. .16½- —
tanks, same basis lb. .12½- —
Camphene chlorinated, 67-69% (see Toxaphene)
Camphor, monobromated, NF, dms., kgs lb. 3.63 - 3.70
Nat., USP, powd. cs., 100-lb. lots. lb. .60 - .65
tablets, 1-oz. cs. lb. .85 - .90
Nat., USP, gran., bbls., 2,000-lb. lots lb. .59 - —
Syn., tech., 1 bbl. or more lb. .48 - —
Syn., USP, gran., powd., bbls., 1,000-lb lots lb. .60 - —
bbls., smaller lots lb. .61 - —
tablets, ctns., 1,000-lb. lots. lb. .85 - —
ctns. 500-lb. lots lb. .86 - —
ctns., smaller lots lb. .87 - —
Camphor oil, sassafrassy, dms. lb. .35 - .55
White, dms. lb. .26 - .50
Cananga oil, native, cns. lb. 5.00 - 6.50
Rectified, cns. lb. 7.25 - 10.00
Candelilla wax, crude, bgs lb. .55 - .56
Refd., pure, bgs lb. .60 - .62

Powdered Candelilla wax 20 to 100 mesh, 8c. higher.

Cantharides, Chinese, cs. lb. 1.00 - —
powd., bgs. lb. 1.15 - —
Russian, bgs. lb. 2.00 - 2.15
powd. bgs lb. 2.15 - 2.30
Caprie acid, dms. lb. .32¼- .34¾
tanks lb. .29¾- —
Caprolactum monomer, bgs., c.l., t.l., f.o.b. works lb. .52 - —
bgs., l.c.l., l.t.l., same basis lb. .57 - —
tanks, same basis lb. .49 - —
Capryl alcohol, 85% dms., c.l., t.l., works lb. .19 - —
dms., l.t.l., same basis lb. .19½- —
tanks, frt. equald. lb. .16½- —
Sec., 92-99%, dms., c.l., f.o.b. works lb. .22 - —
dms., l.c.l., f.o.b. works lb. .23 - —
tanks, f.o.b. works lb. .16½- —
Caprylic acid dms. lb. .32¼- .34¾
tanks lb. .29¾- —
Capsicum (see Pepper red).

Capsicum oil (see Capsicum oleoresin).
Capsicum oleoresin, NF, from dom. pepper, dms lb. 4.00 - —
NF, from African pepper, dms. lb. 4.50 - —
Caraway oil, NF, dms lb. 3.15 - 3.75
Caraway seed, Danish, bgs. lb. .16 - —
Dutch, bgs. lb. .21 - —
Polish, bgs. lb. .17¼- —
Carbazole, 97%, bbls, ton lots, works lb. 1.05 - —
Carbon black, channel, rubber beads, bulk, c.l., works lb. .08 - —
bgs., c.l., works lb. .08½- —
bgs., l.c.l., works lb. .16¼- —
Furnace fast extruding, bgs., c.l., works lb. .06¾- —
ctns., l.c.l., whse. lb. .13½- —
Carbon black, high abrasion, bulk, c.l., works lb. .07¼- —
bgs., c.l., works lb. .07¾- —
bgs., l.c.l., dlvd. or whse lb. .14½- —
high modulus, bgs., c.l., works. lb. .06¼- —
ctns., l.c.l., whse. lb. .13 - —
semi-reinforcing, bgs., c.l., works lb. .05¾- —
bgs., ctns., l.c.l., whse. lb. .12½- —
pigment, high color beads, ctns., c.l., works lb. .78 - —
ctns., l.c.l., dlvd. or whse lb. .87 - —
medium color, uncompressed, bgs., c.l., works lb. .14 - —
bgs., l.c.l., dlvd. or whse lb. .22½- —
Carbon dioxide, indust., wholesale, bulk, 30,000-2,999,999 lbs., dlvd. Metropolitan areas, E ton. 60.00 - 115.00
bulk, 3,000,000 lbs. or more, dlvd. Metropolitan areas, E ton. 55.00 - —
Solid, bulk, wholesale, works ton. 85.00 - —
Carbon disulfide, 55-gal. dms., c.l., works, frt. equald to competitive points lb. .071 - —
55-gal. dms., l.c.l., same basis lb. .086 - .091
5-gal. dms., 30 dms. to c.l., same basis lb. .131 - —
5-gal. dms., less than 30 dms., same basis lb. .161 - —
tanks, dlvd. lb. .0520- —
Carbon tetrachloride, CP, consumers, dms., c.l., frt. alld. lb. .12¾- —
dms., l.c.l., frt. alld. lb. .15¼- —
Tech., consumers dms., c.l., t.l., frt. alld lb. .11¾- —
dms., l.c.l., l.t.l., frt. alld lb. .14¼- —
tanks, frt. alld lb. .10¾- .11¼
Carboxymethyl cellulose (see CMC).
Carbromal, NF, dms., 100-lb lots, works lb. 4.00 - 4.25
dms., smaller lots, works lb. 4.10 - 4.75
Cardamom oil, NF, bots. lb. 39.00 - 42.00
Cardamom seed, bleached "A" lb. 2.50 - —
Bleached "B" lb. 3.25 - —
Decorticated Alleppey, cs. lb. 2.30 - —
Guatemala, cs. lb. 2.05 - —
Green, Alleppey, bgs. lb. 2.15 - —
Ceylon, bgs. lb. 2.25 - —
Carmine No. 40, NF, bulk, 100-lb lots or more, dlvd. lb. 16.80 - —
bulk, smaller lots, dlvd. lb. 16.90 - 17.30
Carnauba wax, chalky, bgs., ton lots lb. .73 - .75
North Country, No. 2, crude, bgs., ton lots lb. .82 - .84
refd., pure, ton lots lb. .91 - .92
North Country, No. 3, Ceara, ton lots lb. .73 - .74
North Country No. 3, Parnahyba, ton lots lb. .74 - .75
No. 3, refd., pure, bgs., ton lots. lb. .81 - .82
No. 1, Ceara, yellow, bgs., ton lots lb. 1.00 - 1.02
Parnahyba, yellow, bgs., ton lots lb. 1.01 - 1.03

Powdered carnauba wax, 20 to 100 mesh 8c. per lb. higher.

Carotene, tech., 1,350,000 A units per gram tins, 5-10 kilo lots, dlvd gram. .20½- —
in carrot oil, 5,000,000 to 8,000,000 A units per lb., dms., works million units. .12 - —
USP, microcrystalline in oil, 400,000 A units per gram., dms., dlvd million units. .144 - —
b-Carotene, in vegetable oil, sea, kilo. 240.00 - —
solid suspension 400,000 A units per gram, cns kilo. 57.60 - —
b-Carotene, liquid in vegetable oil, 500,000 A units per gram, cns kilo. 72.00 - —
Pure, cryst., 1,600,000 to 1,670,000 A units per gram, cns. lb. 5.00 - 5.40
Carvol, bots. lb. .32 - —
Cascara sagrada bark, bulk lb. .32 - —
Casein, dom., edible, acid precip., 30 mesh, bgs., 10,000-lb. lots or more, works lb. .56 - —
edible, acid, precip., 80 mesh, bgs., 10,000-lb. lots or more, works lb. .64 - —
Imp., inedible, acid-precip., grd., Argentine, bgs., c.l., ex-dock Eastern seaports lb. .20 - .20¼
Australian, bgs., basis lb. .22¼- .22½
Cashewnut shell, liquid, treated, dms., c.l., Newark, N.J. lb. .24 - —
dms., ton lots, same basis lb. .25 - —
t.w., same basis lb. .22½- —
Cassella acid, dms., frt. alld., 100% basis lb. 1.44 - 1.75
Cassia oil, redist., USP, cns lb. 7.50 - 9.00
Cassia, Padang, "A," bls. lb. .30 - —
"B," bls. lb. .29 - —
"C," bls. lb. .28 - —
Korintje "A," bls. lb. .34 - —
"B," bls. lb. .30 - —
"C," bls. lb. .30 - —
Castor oil, dom., blown, dms., c.l. lb. .2550- —
dms., l.c.l. lb. .2650- —
Castor oil, dom., dehydrated, bodied, dms., c.l lb. .2700- —
dms., l.c.l. lb. .2850- —
tanks lb. .2500- —
dehydrated, unbodied, dms., c.l. lb. .2500- —
dms., l.c.l. lb. .2660- —
tanks lb. .2360- —
hydrogenated, bgs., c.l. lb. .2450- —
bgs., ton lots lb. .2850- —
bgs., l.c.l., dlvd lb. .3050- —
Castor oil, No. 1, dms., c.l. lb. .2150- —
dms., l.c.l. lb. .2.00- —
tanks lb. .2000- —
No. 3, tech., dms., c.l. lb. .2125- —
dms., c.l., lb. .2225- —
tanks lb. .1925- —
Refd. deod., dms., c.l. lb. .2350- —
dms., l.c.l. lb. .2750- —
tanks lb. .2.50- —
USP, dms., c.l. lb. .2350- —
dms., l.c.l. lb. .2450- —
tanks lb. .2150- —
Imported, No. 1, Braz., tanks lb. .18¾- .19
Sulfonated, 50%, cns., works lb. .19
75%, dms., works lb. .19 - .19½
Castor oil acids, dehydrated, dms. lb. .44¼- .46¼
Split, dms. lb. .37¼- .38¼
Castor pomace, bgs., c.l., works ton. 35.00 - —
Castoreum nat., cns. lb. 5.25 - —
Syn., cns. lb. 9.00 - —
Catechol, CP, cryst., fib., dms., works lb. 2.17½- —
Resub., dms., works lb. 4.29½- —
Catnip leaves, Southern, bls. lb. Nominal.
Caustic potash (see Potash caustic).
Caustic soda (see Soda, caustic).
Cedarleaf oil, USP XIII cns., dms. lb. 3.25 - 3.50
Cedarwood oil, cns., dms. lb. .70 - —
Celery seed, French, bgs. lb. .37 - —
Indian, bgs. lb. .19 - —
Cellulose acetate, flake, powd., bgs., t.l., dlvd. E lb. .36 - .51
Cellulose acetate-butyrate, powd., 17% butyryl content, bgs., dlvd. E lb. .545 - .555
27% butyryl content, bgs., dlvd. E lb. .595 - .605
38% butyryl content, bgs., dlvd. E lb. .545 - .555
38% butyryl content, half-second, bgs., dlvd. E lb. .545 - .555
50% butyryl content, bgs., dlvd. E lb. .585 - .595
Cellulose gum, methyl (see Methyl Cellulose).
Cellulose gum, pure, high vis., bgs., 23,000-lb. lots or more works, frt alld lb. .57 - —
bgs., smaller lots, same basis lb. .59 - —
Cerium hydrate 74% CeO, fib. dms., 100-lb. lots or more lb. 1.40 - —
77% CeO, fib. dms., 100-lb. lots or more lb. 1.74 - —
Cerium oxalate (see Rare earth oxalate)
Cerium oxide, optical grade, bgs., 50-lb. lots or more, dlvd. lb. 1.85 - 1.90
bgs., smaller lots, dlvd. lb. 2.15 - —
Cetyl alcohol, NF, fib. cns., c.l., t.l., dlvd. E lb. .41½- —
fib. cns., l.c.l., same basis lb. .43½- —
tanks, same basis lb. .39 - —
Extra, cns., c.l., t.l., dlvd. E lb. .48½- —
fib. cns., l.c.l., same basis lb. .50½- —
tanks, same basis lb. .46 - —
Chalk (see Calcium carbonate)
Chamomile flowers, Hungarian, bls lb. .90 - 1.00
Roman, cs. lb. 1.50 - 1.75
Chamomile oil, blue Hungarian, bots lb. 350.00 - —
Charcoal, activated, NF, fib dms., c.l., works lb. .25 - .32
fib. dms., 5-ton lots, works lb. .26½- .32½
fib. dms., smaller lots, works lb. .27 - .50
Charcoal, black (see Charcoal, activated).
Charcoal, bone (see Bone black).
Charcoal, hardwood, lump, bulk, c.l., f.o.b. plant ton. 55.00 - —
briquets, bulk, c.l., f.o.b. plant ton. 80.00 - —
5-lb. paper bgs., c.l., same basis ton. 106.00 - —
20-lb. paper bgs., c.l., f.o.b. plant, ton. 90.00 - —
40-lb paper bgs. c.l. same basis ton. 86.00 - —
Chenopodium oil, NF, cns lb. 4.25 - 5.00
Chicago acid, paste, bbls., frt. alld. lb. 3.21 - —
Chinawood oil (see Tung oil).
Chloral, tech., 94% min., dms., c.l., works lb. .23 - —
dms., l.c.l., works lb. .24 - —
tanks, multiple units, 5 cars, dms., l.c.l., works lb. .21 - —
Chloral hydrate, USP, jars, 1,000-lb. lots lb. 1.00 - —
jars, 500-lb. lots lb. 1.03 - —
jars, 100-lb. lots or less lb. 1.05 - —
Chlordan, agricultural, dms., c.l., frt alld lb. .65 - —
dms., l.c.l., 5,000-10,000-lb. lots, frt alld lb. .66 - —
Chlordan, clarified, dms., c.l., frt. alld lb. .69 - —
dms., l.c.l., 5,000-10,000-lb. lots, frt alld lb. .70 - —
Chlorinated paraffin, 40%, dms., c.l., frt. alld lb. .15 - —
dms., l.c.l., 10 dms. or more, same basis lb. .16 - —
70%, dms., c.l., same basis lb. .18½- —
dms., l.c.l., 10 dms. or more, same basis lb. .19½- —
Chlorinated rubber, 5, 10, 20 cps., ctns., c.l., works lb. .60 - —
ctns., l.c.l., works lb. .61 - —
125 cps., ctns., c.l., works lb. .70 - —
300 cps., ctns., c.l., works lb. .80 - —
Chlorine, liq., cyls., c.l., works, frt equald lb. .11 - —
cyls., l.c.l., Metropolitan area lb. .12½- .13¾
tanks, single units, works, frt. equald 100 lbs. 3.25 - —
tanks, multiple units, 5 cars, works, frt. equald 100 lbs. 4.15 - —
tanks, multiple units, 4 cars, same basis 100 lbs. 4.35 - —
tanks, multiple units, 2 cars, same basis 100 lbs. 5.35 - 5.85
tanks, multiple units, 1 car, same basis 100 lbs. 6.25 - 7.25
Chloroacetic acid, mono, flake, 99%, purif., dms., c.l lb. .23½- .25½
dms., l.c.l. lb. .24½- —
tech., flake, 96-97%, dms., c.l., dms., l.c.l., frt. equald lb. .20 - —
frt. equald lb. .19 - —
2-Chloro-4-aminotoluene, tech., liq., dms., frt alld lb. 1.03 - —
4-Chloro-2-aminotoluene, fused, bbls. lb. 1.38 - —
6-Chloro-2-aminotoluene, tech., liq., dms., frt. alld lb. .66 - —
m-Chloroaniline, dms., c.l., frt. alld. lb. .75 - —
dms., l.c.l., same basis lb. .77 - —
tanks, same basis lb. .73 - —
o-Chloroaniline, dms., c.l., frt. alld. lb. .52 - —
dms., l.c.l., same basis lb. .54 - —
tanks, same basis lb. .50 - —
p-Chloroaniline, dms., c.l., frt. alld. lb. .77 - —
dms., l.c.l., same basis lb. .79 - —
o-Chlorobenzaldehyde, dms., t.l., works lb. 1.05 - —
dms., l.t.l., same basis lb. 1.20 - —
p-Chlorobenzaldehyde, dms., l.c.l., works lb. 1.95 - —
o-Chlorobenzoic acid, fib. dms., t.l., works lb. 1.10 - —
fib. dms., smaller lots, works lb. 1.25 - —
p-Chlorobenzoic acid, fib. dms., 2,000-lbs. or more, works. lb. 2.25 - —
fib. dms., less than 2,000-lbs., same basis lb. 2.30 - —
Chloroform, tech., dms., c.l., dlvd. E lb. .18 - —
dms., l.c.l., same basis lb. .19 - —
tanks, same basis lb. .17 - —
USP, dms., c.l., dlvd. lb. .27 - —
dms., l.c.l., dlvd. lb. .30 - —
tanks, minimum 4,000 gals. dlvd. lb. .25 - —
2-Chloro-4-nitroaniline, paste, dlvd. E., 100% basis lb. .81 - —
Powd., dlvd. E., 100% basis lb. .86½- —
4-Chloro-2-nitroaniline, powd., dlvd. E. lb. .86 - —
4-Chloro-2-nitrophenol, tech., paste, dms., frt. alld. lb. .75 - —
4-Chloro-2-nitrotoluene, tech., solid, dms., frt. alld. lb. .99 - —
6-Chloro-2-nitrotoluene, tech., solid, dms., frt. alld lb. .17 - —
o-Chlorophenol, dms., c.l., frt. equald lb. .37 - —
dms., l.c.l., same basis lb. .38 - —
p-Chlorophenol, dms., c.l., frt. equald lb. .37 - —
dms., l.c.l., same basis lb. .38 - —
Chloropicrin, coml., cyls., 180 lbs., frt. alld lb. 1.07 - —
cyls., 100 lbs., same basis lb. 1.08 - —
cyls., 50 lbs., same basis lb. 1.14 - —
Chlorosulfonic acid, dms., c.l., frt. equald lb. .0465- —
dms., l.c.l., frt. equald lb. .0515- —
tanks, frt. equald lb. .0415- —

Chlorosulfonic acid, in stainless steel dms. ½c. per lb. higher

o-Chlorotoluene, tech., dms., t.l., works lb. .37 - —
dms., l.c.l., t.t.l., same basis lb. .38 - —
Choline bitartrate, fib. dms., frt. adjusted kilo 2.75 - 3.00
Choline chloride, fib. dms., frt. adjusted kilo. 2.75 - 3.00
Choline dihydrogen citrate, fib. dms., frt. adjusted kilo. 2.75 - 3.00
Chrome green, CP, dark, light, medium blue content, 1-15%, bbls., dlvd E of Rockies. lb. .43 - —
blue content, 16-30%, bbls., same basis lb. .44 - —
medium blue content, 41-45% bbls., same basis lb. .44 - —
blue content, 45-49%, bbls., same basis lb. .45 - —
Reduced color 25%, bbls., same basis lb. .20 - —

Chrome green prices 1c. higher W of Rockies.

Chrome orange, CP, bbls., dlvd. E of Rockies lb. .35 - —

Chrome orange prices 1c higher W of Rockies.

Chrome yellow, CP, bbls., dlvd. E. of Rockies lb. .35 - —

Chrome yellow price 1c. higher W of Rockies.

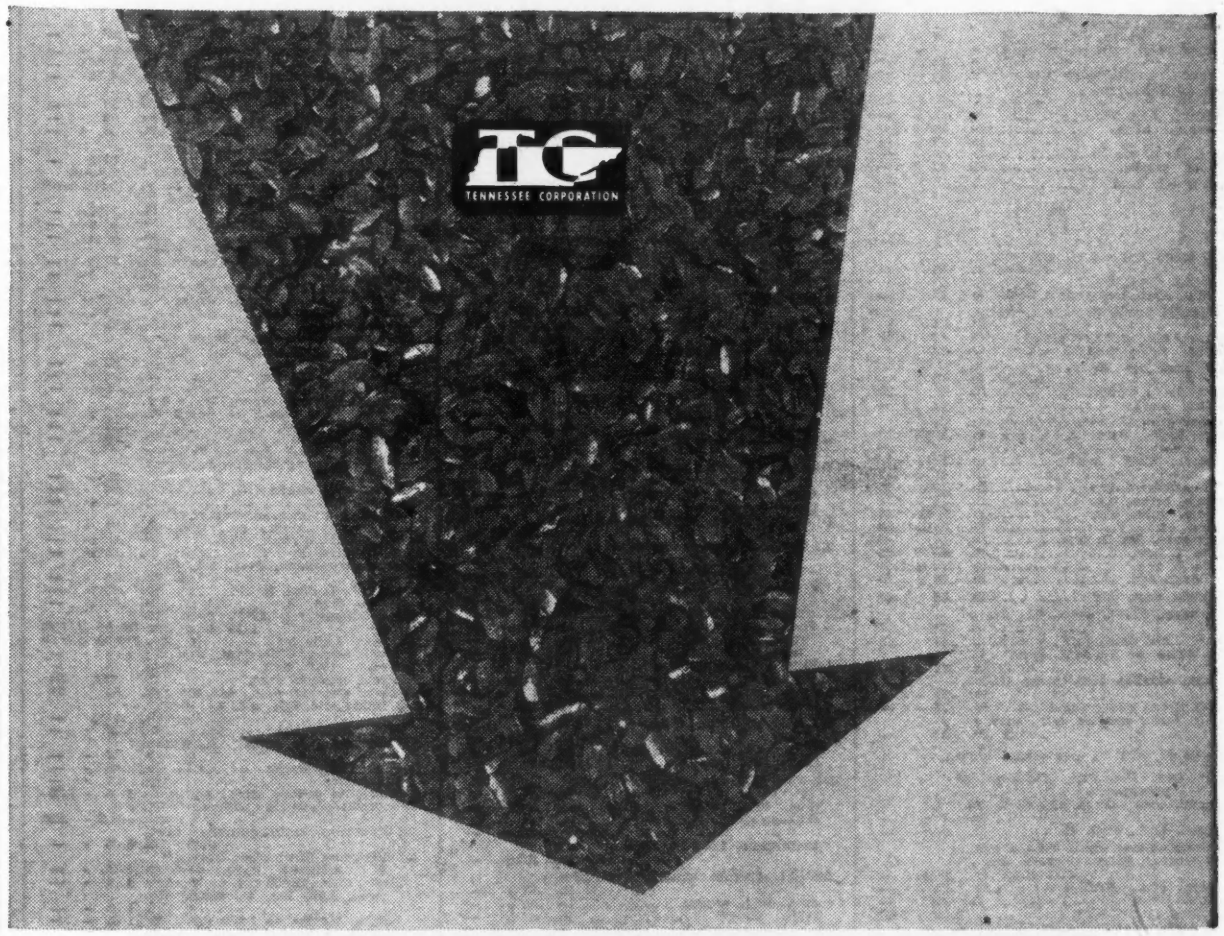
Chromic acid, 99¾%, dms., c.l., works, frt. equald lb. .29½- —
dms., l.c.l., dlvd, N. Y. Metropolitan area lb. .30 - .31
Chromic acid, NF (see Chromium trioxide).
Chromium acetate, soln., 7½%, dms., 500-2,000-lb. lots, works. lb. .10 - —
Chromium fluoride, bbls., works lb. .51 - .52
Chromium oxide, hydrated, bbls., fib. dms., c.l., frt. alld. lb. 1.20 - —
Pure, bgs., c.l., frt. alld lb. .44½- —
bgs., l.c.l., same basis lb. .45¼- —
Chromium trioxide, NF, bots lb. 1.15 - —
Cinchona bark, NF, red, broken, bgs lb. .25 - —
NF, yellow broken, bgs lb. .35 - .40
Cinnamic acid, refd., bots lb. 2.50 - 3.50
Cinnamic alcohol, bots. lb. 1.60 - 1.75
Cinnamic aldehyde, dms lb. .80 - 1.00
Cinnamon, Ceylon, No. 2, bgs lb. .53 - —
Ceylon, No. "0000," bgs. lb. .73 - —
Cinnamon bark oil, bots lb. 36.00 - 70.00
Cinnamon leaf oil, crude, dms lb. 1.60 - 2.00
USP, (Cassia), cns., dms lb. 8.50 - 13.50
Citral, CP, bots. lb. 3.60 - 4.00
Extra, bots. lb. 3.60 - 5.00
Syn., dms. lb. 7.25 - 7.40
Citric acid, USP, anhyd., fine gran., bgs., dms., c.l lb. .29½- .30
bgs., dms., 10,000-lb. lots, 1 shipt lb. .30 - .30¼
bgs., dms., smaller lots lb. .30½- .31
Citric acid, USP, hydrous, fine gran., bgs., dms., c.l. lb. .27½- .28
bgs., dms., 10,000-lb. lots, 1 shipt lb. .28 - .28¼
bgs., dms., smaller lots lb. .29 - .29¼

Powdered citric acid ½c. per lb. higher.

Citronella oil, Ceylon, dms lb. 1.00 - —
Java-type, dms lb. .92 - —
Citronellal, bots., dms lb. 1.60 - 2.10
Citronellol, bots., dms lb. 1.90 - 2.50
Citronellol, synthetic, dms lb. 1.70 - —
Civet, artif., bots lb. 13.75 - 15.00
Nat., bots. oz. 8.50 - 15.00
Clay, ball, dom., airfloated, bgs., c.l., Tenn ton. 17.50 - 21.50
crushed shed moisture, bulk, c.l., Tenn ton. 8.00 - 11.25
imp., airfloated, bgs., c.l., Atl port net-ton. 43.00 - 47.00
lump, bulk, Atl. port net-ton. 31.50 - 37.50
Clay, China, dom., dry-grd., air-floated, 99%, 325 mesh, Georgia, bgs., c.l., works ton. 11.00 - 17.00
Georgia, bgs., l.c.l., works ton. 13.50 - 22.50
imp., white, lump, bulk, c.l., ex-dock, Philadelphia, Portland, Me long-ton. 23.00 - 35.00
white, powd., bgs., c.l., ex dock net-ton. 50.00 - —
bgs., l.c.l., ex whse net-ton. 60.00 - 70.00
Cleaners naphtha, petroleum, 105° Flash, tankcars, New Jersey and New York gal. 18 - —
Group 3 gal. .12875- —
Houston, Texas gal. .145 - —
140 F Flash, tankcars, New Jersey or New York gal. .205 - —
Group 3 gal. .154 - —
Houston Texas gal. .17 - —
Cleve's acid, tech., mixed, solid, dms., frt. alld lb. 1.05 - —
1,6, tech., solid, dms., frt. alld lb. .77 - —
1,7, tech., dms., frt alld lb. 2.20 - —
Cloves, Madagascar, bgs. lb. .38½- —
Zanzibar, bgs. lb. .38½- —
Clove bud oil, USP, dms. lb. 2.70 - 3.60
Clove leaf oil, crude, dms. lb. 1.25 - —
CMC, crude, 96.4% low or medium vis., bgs. or fib dms., 23,000 lbs., dlvd. E., 100% basis lb. .41½- —
96.4% low or medium vis., bgs. or fib. dms., less than 23,000 lbs., dlvd. E., 100% basis lb. .43½- —
65%, low or medium vis., bgs., or fib. dms., c.l., dlvd. E., 100% basis lb. .41½- —
bgs. or fib. dms., l.c.l., dlvd. E., 100% basis lb. .43¼- —
purif., high vis. (see Cellulose gum).
CMC, standard low or medium vis., bgs., 23,000 lbs., works, frt. alld lb. .57 - —
bgs., smaller lots, same basis. lb. .59 - —

CMC prices W. of the Rockies are 2c. per lb. lower and are on a works basis.

Coaltar, crude, resale for soln., tanks, works..gal. .17 • —
Refd., resale, indust., dms., c.l., ex whse..gal. .35 • —
dms., l.c.l., ex whse...gal. .39 • —
tanks, works .....gal. .20½- —
Coaltar pitch, aluminum, bulk, works. ton.44.00 • —
Carbon and indust., bulk, works. ton.44.00 • —
Core, bulk, works.....ton.40.50 • —
Fiber, bulk works.....ton.48.00 • —
Roofing, 140-155 F., Federal Specification RP-381 Type 1,
Cobalt acetate, 23.7% Co., dms., dlvd. lb. 1.04 • —
Cobalt blue, genuine, 250 lb. bbls., dlvd. E. of Rockies lb. 4.90 • —
Cobalt blue prices 1c. higher W. of Rockies.
Cobalt blue, imitation (see Ultramarine blue).
Cobalt carbonate, 48% Co., powd., bgs., dlvd lb. 1.45 • —
Cobalt chloride, 24.2% Co., dms., dlvd lb. .93 • —
Cobalt hydrate, 60-61% Co., dms., dlvd lb. 2.05 • —
Cobalt linoleate, fused 8½% Co., dms lb. .71½- —
Liq., 6% Co., dms.....lb. .57½- —
Cobalt metal, 99% dms., f.o.b. carrier lb. 1.50 - —
Cobalt naphthenate, liq., 6% Co., dms., dlvd lb. .48¾- —
Cobalt nitrate, 20.1% Co., bbls., dlvd. lb. .75 • —
Cobalt oxide, black, ceramic grade, 72½-73½% Co., kgs., dlvd. E. of Mississippi R. lb. 1.15 • —
70-71% Co. kgs., same basis lb. 1.12 • —
Cobalt oxide prices W. of Mississippi R. 3c. per pound higher.
Cobalt phosphate, powd., 32.1% Co., dms., dlvd lb. 1.35 • —
Cobalt resinate, fused, 3% Co., dms. lb. .33½- —
Cobalt sulfate, cryst., 21% Co., dms., dlvd lb. .64 • —
Monohydrated, 33% Co., dms., dlvd lb. 1.09 • —
Cobalt tallate, 6% Co., dms., dlvd. lb. .44 • —
Cocaine, USP, ens., 100-oz. lots, f.o.b. works oz.17.50 • —
Cocaine hydrochloride, ens., 100-oz. lots, f.o.b. works oz.13.75 • —
Cocillana bark, bls.....lb. .18 • .20
Cocoa butter, bgs.....lb. .58 • .63
Coconut oil, crude, tanks, New York..lb. .14½- —
tanks, Pac. coast .....lb. .12⅜- —
Refd., deodorized, dms. .....lb. .22 - .22½
Coconut oil acids, dist., dms. ....lb. .26½- .29
tanks .....lb. .24 • —
Double dist. (stripped), dms....lb. .27½- .30
tanks .....lb. .25 • —
Cod oil, dms., spot.....lb. .08⅜- .08½
Codeine, NF, ens., 100-oz. lots oz.13.25 • —
Codeine hydrochloride, ens., 100-oz. lots oz.11.75 • —
Codeine phosphate, USP, ens., 100-oz. lots oz.10.25 • —
Codeine sulfate, USP, ens., 100-oz. lots oz.10.75 • —
Codliver oil, USP, dms.....gal. 1.40 - 1.70
Cohosh root, black, bls.....lb. .20 • .25
Blue, bls.....lb. .20 • .25
Colchicine, USP, bots.....oz.29.00 • —
Colchicum root, bls.....lb. .35 • .45
Colchicum seed, bgs.....lb. .75 • .80
Collodion, USP, dms.....lb. .32½- —
USP, flexible, dms.....lb. .34 • —
Colocynth pulp, bls.....lb. .75 • —
Colombo root, bls.....lb. .16 • .18
Condurango bark, bls.....lb. .18 • .20
Congo copal gum, No. 1, bgs....lb. .26 • .27
No. 2, bgs.....lb. .23 • .25
No. 3, bgs.....lb. .18 • .20
Copaiba balsam, ens., dms.....lb. .65 - 1.10
Copaiba oil, cns .....lb. 1.35 - 2.00
Copper acetate, bbls., c.l., works. lb. .53 • —
bbls., l.c.l., works .....lb. .54 • —
Copper carbonate, 55%, bgs., c.l., works..lb. .3635- —
bgs., l.c.l., works.....lb. .3785- —
Copper chloride, cupric, anhyd., dms., works..lb. .45½- .46
cryst., dihydrate, dms., works. lb. .31 - .31½
cryst., dried, dms., works..lb. .39¼- .39¾
Copper chloride, cuprous, dms., works..lb. .4135- .4435
Copper cyanide, tech., dms., 20,000-lb. lots or more..lb. .609 • —
dms., 1,000-lb. lots or more..lb. .619 • —
dms., smaller lots.....lb. .639 • .65
Copper gluconate, dms .....lb. 3.20 • —
Copper hydrate, dry, dms., c.l., frt. E. of Miss..lb. .53½- —
dms., l.c.l., same basis .....lb. .54 • —
Copper metal, electrolytic, dlvd. Valley basis lb. .33 • .36
Copper naphthenate, liq., 8% Cu, dms, frt. alld..lb. .26½- —
Copper nitrate, tech., cryst., dms., works lb. .30¾ .32¼
Copper oleate, solid, 9% Cu, dms., works lb. .45 • —
Copper oxide, black, bbls., 100-5,000-lb lots, works lb. .49¼- —
Copper oxide, red, 97%, USN Type 1, bbls., 100-5,000-lb. lots. lb. .50½- —
90%, USN Type II, bbls., 100-5,000-lb. lots or more, works. lb. .48½- —
Copper quinolinolate, 18% Cu, dms., ton lots..lb. 4.25 • —
10% active quinolinolate, dms..lb. 1.14 - 1.15
Copper resinate, precip., dms., frt. alld..lb. .41½- —
Copper sulfate, CP, gran., dms., works..lb. .1885- —
Cryst., 99%, bgs., c.l., works. 100 lbs.13.00 • —
bgs., l.c.l., works....100 lbs.13.25 -15.75
Monohydrated, 35%, dms., c.l., works..100 lbs.24.00 • —
dms., l.c.l., works...100 lbs.24.75 • —
Tribasic, distributors, bgs., c.l., works..100 lbs.29.60 • —
bgs., l.c.l., works....100 lbs.31.10 • —
Copper undecylenate, dms.....lb 2.75 • —
Copra, Atl., Gulf ports, c.i.f....ton.172.50 • —
Pac. ports, c.i.f .....lb.167.50 • —
Coriander oil, USP, bots.....lb. 9.55 -10.00
Coriander seed, Moroccan, bgs..lb. .12 • —
Rumanian, bgs. .....lb. .10½- —
Yugoslavian, bgs. .....lb. .08½- —
Corn oil, crude, tanks, works....lb. .12 • —
Foots (soapstock) acid 95%, tanks, New York..lb. .05 • —
Refd., salad, dms.....lb. .1773- .18
tanks .....lb. .1573- —
Corn oil acids, dist., dms. .....lb. .15¾- .18¼
tanks .....lb. .1648- —
Corn sugar, tanners, chipped, paper bgs., c.l., 60,000 lbs. min. 100 lbs. 7.30 • —
paper bgs., l.c.l.....100 lbs. 7.45 • —
Corn syrup, 42° Be., tanks, f.o.b. plant..100 lbs. 5.41 • —
non-ret. dms., c.l., same basis. 100 lbs. 7.52 • —
Corrosive sublimate (see Mercuric chloride).
Cortisone acetate, USP, bots., kilo or more..gram. 1.05 - 1.75
Costus oil, bots.....oz. 2.50 • —
Cottonseed meal, 41%, bgs., Memphis..ton.54.00 -55.00
Cottonseed oil, crude, tanks, South, East..lb. .09¾- —
tanks, Valley .....lb. .09¾- —
tanks, Texas, Lubbock .....lb. .09¾- .09¾
tanks, Texas, Waco .....lb. .09⅜- .09¾
Foots (soapstock), acid, 95%, tanks, Texas, Waco..lb. .03¼- —
Refd., salad, dms. .....lb. .14¾- .15
tanks .....lb. .12¾- —
Cottonseed oil acids, dist., dms..lb. .15¾- .18¼
tanks .....lb. .13½- —
Coumarin, NF, cryst., dms....lb. 3.30 - 3.40
Cramp bark, NF, bls.....lb. .90 - 1.00
Cream of tartar (see Potassium bitartrate).
Creosote carbonate, NF, bots., cbys., lb. 3.05 - 3.26
Creosote, coaltar, crude, tanks, works, frt. adjusted..gal. .24 • —
Crude, soln. 80%, tanks, works. gal. .226 • —
Refd., dms., c.l., works.....gal. .50 • —
dms., l.c.l., same basis....gal. .62 • —
tanks, same basis.....gal. .38 • —
West Coast creosote prices computed on a basis of 24c. per gallon for straight oil and 20c. per gallon for coaltar.
Creosote, beechwood, cbys., dms., f.o.b. works, dlvd. in Metropolitan area..lb. 1.72 - 1.77
Hardwood, NF, cbys., dms., same basis..lb. 1.42 - 1.47
Pinewood, dms., incl., c.l., works. lb. .0561- —
dms., incl., l.c.l., works.....lb. .0634- —
dms., incl., l.c.l., ex whse, New York..lb. .0745- —
tanks, works .....lb. .0460- —
Creosote oil (see Creosote coaltar).
Cresol, tech., 50% below 204°C., dry above 207°C., wide distillation range, non-ret. dms., c.l., frt. alld lb. .16¼- —
non-ret. dms., l.c.l., same basis..lb. .17½- —
tanks, same basis.....lb. .145 • —
Cresol, USP, 50% 204°C., dry above 207°C., wide distillation range, non-ret. dms., c.l., same basis..lb. .18 • —
non-ret. dms., l.c.l., same basis. lb. .19 • —
tanks, same basis.....lb. .16 • —
m-Cresol, 95-98%, dms., c.l., works. lb. .60 • —
dms., l.c.l., works.....lb. .61 • —
m-p-Cresol, 5-95% 3°C., dms., c.l., frt. equald lb. .18 • —
dms., l.c.l., same basis.....lb. .19 • —
tanks, same basis.....lb. .16 • —
2.97% 2°C., dms., c.l., frt. equald. lb. .22 • —
dms., l.c.l., same basis.....lb. .23 • —
tanks, same basis .....lb. .20 • —
o-Cresol, 30.5°C. m.p. and over, ret., dms., c.l., frt. equald lb. .17 • —
ret. dms., l.c.l., same basis..lb. .18 • —
tanks, same basis.....lb. .15 • —
30°-30.49°C. m.p., dms., c.l., frt. equald lb. .16½- —
ret. dms., l.c.l., same basis..lb. .17½- —
tanks, same basis.....lb. .14½- —
o-Cresol, 30.5°C. m.p. and over, ret. dms., c.l., frt. alld lb. .15½- —
non-ret. dms., l.c.l., same basis. lb. .16½- —
tanks, same basis.....lb. .135 • —
Cresol, 29°-29.9°C. m.p., dms., c.l., frt. equald lb. .16 • —
ret. dms., l.c.l., same basis..lb. .17 • —
tanks, same basis.....lb. .14 • —
25°-28°C. m.p., dms., c.l., frt. equald lb. .15 • —
ret. dms., l.c.l., same basis..lb. .16 • —
tanks, same basis.....lb. .13 • —
p-Cresol, 98%, dms., c.l., dlvd. lb. .52 • —
dms., l.c.l., dlvd.....lb. .53 • —
tanks, dlvd. .....lb. .49 • —
2,3-Cresotic acid, dms., ton lots, works..lb. .70 • —
dms., smaller lots, works.....lb. .72 • —
p-Cresyl methyl ether, cns....lb. 1.80 - 2.05
Cresylic acid, coaltar, dom., meta-para content above 25%, resins and tricresyl phosphate grades, dms., c.l., t.l., frt. equald gal. 1.35 • —
dms., l.c.l., same basis..gal. 1.40 • —
tanks, same basis .....gal. 1.15 • —
metapara content 25% or less, dms., c.l., t.l., same basis gal. 1.20 • —
dms., l.c.l., same basis..gal. 1.25 • —
tanks, frt. equald.....gal. 1.00 • —
Cresylic acid, coaltar, imp., meta-para content 25% or less, f.o.b. works, frt. equald, to competitive points, 50 dms. or more, gal. 1.03½- —
less than 50 dms., same basis..gal. 1.05 - 1.15
tanks, same basis.....gal. 1.00 • —
Crotonaldehyde, 91-93%, dms., l.c.l, works..lb. .25 • —


COPPER SULFATE

Tennessee Copper Sulfate is available in powdered form as well as large, medium, industrial, granular and snow crystals.

Our basic position in Copper and our technical experience in Copper Chemicals is your assurance of highest quality and uniform consistency.

Let us send you complete information on TC Copper products.

For complete listing of our products see our inserts
In CHEMICAL WEEK BUYERS' GUIDE, Pages 173-176
or CHEMICAL MATERIALS CATALOG, Pages 551-554.

TC TENNESSEE CORPORATION
TENNESSEE CORPORATION
612-620 GRANT BUILDING, ATLANTA 3, GEORGIA

Crotonic acid, dms., 200 lbs. or more, l.c.l., dlvd. lb. .36 - —
Cryolite, nat., indust., bgs., c.l., works 100 lbs.13.00 - —
bgs., l.c.l., works 100 lbs.14.25 - —
Cube root, powd., 5% rotenone, bgs., t.l., works lb. .21 - —
bgs., l.t.l., works lb. .22 - —
Cubeb berries, NF, bgs. lb. 1.00 - —
Powd., cs. lb. 1.15 - —
Cubeb oil, cns lb.12.00 -16.00
Cumene, dms., c.l., works lb. .12 - —
dms., l.c.l., works lb. .14 - —
tanks, works lb. .11 - —
Cumin seed, Iranian, bgs. lb. .22 - —
Moroccan, bgs. lb. .36 - —
Turkish, bgs. lb. .27 - —
Cumin seed oil, bots., cns lb.15.50 -17.00
Cyanamide, fertilizer, mixing grade, 21% N, gran., bgs., Niagara Falls, Ont., contract. ton.57.00 - —
Fertilizer, pulv., 21% N, bgs., works unit-ton. 2.85 - —
Cyanamide, fertilizer, indust. grade, bgs, c.l., works ton.75.00 - —
bgs., l.c.l., works ton.96.00 - —
Indust. grade, 6-16 mesh, dms., c.l., works ton.120.00 - —
dms., l.c.l., works ton.140.00 - —
Cyclohexane, 99%, tech., dms., c.l., dlvd. E of Rockies gal. 1.02 - —
dms., l.c.l., same basis gal. 1.10 - —
dms., c.l., dlvd. W of Rockies gal. .77 - —
dms., l.c.l., same basis gal. .85 - —
tanks, works gal. .55 - —
98%, tech., 40-dm. lots or more, f.o.b. works gal. .56 - —
5-39 dms., same basis gal. .60 - —
tanks, same basis gal. .36 - —
Cyclohexanol, tech., dms., c.l., works, frt alld. E lb. .28½- —
dms., l.c.l., works, same basis, lb. .29½- —
tanks, works, same basis lb. .26 - —
Cyclohexanone, tech., dms., c.l., works lb. .33½- —
dms., l.c.l., works lb. .34½- —
tanks, works lb. .31 - —
lb. .49 - —
dms., l.c.l., works lb. .50 - —
tanks, works lb. .47 - —
Cypress oil, bots. lb. 5.30 - —

## D

2,4-D, tech., bgs., dms., c.l., works, frt. equald lb. .40 - —
tanks, dlvd. E. lb. .41 - —
bgs., dms., l.c.l., same basis lb. .45 - .49
2,4-D butyl ester, dms., c.l., works, lb. .43 - —
dms., l.c.l., same basis lb. .48 - .52
tanks, same basis lb. .42 - —
2,4-D isopropyl ester, dms., c.l., works lb. .43 - —
dms., l.c.l., works lb. .48 - .52
tanks, works lb. .42 - —
Dammar gum, Batavia, A E, cs lb. No stocks.
East India, Batu, bold, bgs lb. .15½- .18
nubs and chips, bgs. lb. .09 - .10
black, bold, bgs lb. .15½- .18
nubs and chips, bgs. lb. .12¼- .13½
unscraped, bgs. lb. .13 - .14½
pale, chips, bgs. lb. .15 - .17
pale, nubs, bgs. lb. .20¾- .24
Siam, cs. lb. .31½- .34
Singapore, No. 1, bgs. lb. .34 - .40
No. 2, bgs. lb. .29 - .32
No. 3, bgs. lb. No stocks.
dust, bgs. lb. .18 - .20
Dandelion root, bls lb. .35 - .40
DDD, tech., flake, grd., fib. dms., c.l., works lb. .45 - .47
fib. dms., l.c.l., works lb. .46 - .48
DDT, flake or lump, bgs., c.l., dlvd lb. .23 - —
bgs., smaller lots, same basis, lb. .25 - —
fib. dms., c.l., same basis lb. .24 - —
fib. dms., smaller lots, same basis lb. .26 - —

Powdered DDT 1c. per pound higher.

DDVP (see Dimethyl dichlorovinyl phosphate).
l-Decanol, tech., dms., c.l., dlvd. E. lb. .43½- —
dms., l.c.l., dlvd. E. lb. .45½- —
Cyclohexylamine, dms., c.l., works.
Decyl alcohol, mixed isomers, dms., c.l., dlvd lb. .23½- —
dms., l.c.l., dlvd. lb. .25 - —
tanks, dlvd. lb. .21 - —
Perfume grade, bots. lb. 1.00 - 2.00
Decyl alcohol, normal (see l-Decanol)
Deertongue leaves, bls. lb. .55 - .60
Defluorinated phosphate, feed grade, 14% P, paper bgs., c.l., t.l., Tupelo, Miss. ton.57.07 - —
18% P, paper bgs., c.l., works, ton.66.25 -71.80
19% P, paper bgs., c.l., t.l., works, Houston, Tex. ton.74.35 - —

Prices of defluorinated phosphate in bulk $3 per ton less than bg. c.l. prices.

Degras, common (15-17% free fatty acid), 400-lb. dms lb. .12 - .14
Neutral (over 2% free fatty acid), 400-lb. dms lb. 13 - —
Denatured alcohol, ethyl, CD-12, CD-13, CD-14, CD-17, dms., c.l., dlvd. E. of Rockies, gal. .69½- —
dms., l.c.l., same basis gal. .74½- .80½
tanks, dlvd., same basis gal. .53½- —

Tankcar sales require written authorization by Alcohol and Tobacco Tax Division.

Denatured alcohol, ethyl, proprietary solvent, dms., c.l., nlvd. E. of Rockies gal. .72 - —
dms., l.c.l., same basis gal. .77 - .83
tanks, same basis gal. .56 - —

Tankcar sales require written authorization by Alcohol and Tobacco Tax Division.

Denatured alcohol, ethyl, SD1, dms., dlvd. E. of Rockies gal. .70½- —
dms., l.c.l., same basis gal. .75½- .81½
tanks, same basis gal. .54½- —
SD2B, dms., c.l., dlvd. E. of Rockies gal. .69 - —
dms., l.c.l., same basis gal. .74 - .80
tanks, same basis gal. .53 - —
SD3A, dms., c.l., dlvd. E. of Rockies gal. .68 - —
dms., l.c.l., same basis gal. .73 - .79
tanks, same basis gal. .52 - —
Denatured alcohol, ethyl, SD23A, dms., c.l., dlvd. E. of Rockies gal. .70½- —
dms., l.c.l., same basis gal. .75½- .81½
tanks, same basis gal. .54½- —
SD23H, dms., c.l., dlvd. E. of Rockies gal. .71 - —
dms., l.c.l., same basis gal. .76 - .82
tanks, same basis gal. .55 - —
Denatured alcohol, SD29, dms., c.l., dlvd. E. of Rockies gal. .69½- —
dms., l.c.l., same basis gal. .74½- .80½
tanks, same basis gal. .53½- —
SD30, dms., c.l., dlvd. E. of Rockies gal. .68 - —
dms., l.c.l., same basis gal. .73 - .79
tanks, same basis gal. .52 - —
Denatured alcohol, ethyl, SD-35A, dms., c.l., dlvd. E. of Rockies gal. .71 - —
dms., l.c.l., same basis gal. .76 - .82
tanks, same basis gal. .55 - —
SD-40, dms., c.l., dlvd. E. of Rockies gal. .70½- —
dms., l.c.l., same basis gal. .75½- .81½
tanks, same basis gal. .54½- —

For anhyd. alcohol on above formulas prices are 7c. per gal. higher.

West coast dlvd. prices are the same as eastern prices, except in Idaho, Montana, Oregon, and Washington where a 5c. differential on tankcars is maintained.

d-Desoxyephedrine hydrochloride, dms lb..15.00 -17.00
dl-Desoxyephedrine hydrochloride, dms lb. 6.50 - —
Dextrin, corn, gum, paper bgs., c.l., 100 lbs. 9.38 - —
paper bgs., l.c.l. 100 lbs. 9.53 - —
canary dark, paper bgs., c.l. 100 lbs. 9.22 - —
paper bgs., l.c.l. 100 lbs. 9.37 - —
indust. grade, 6-16 mesh, canary light, paper bgs., c.l. 100 lbs. 9.12 - —
paper bgs., l.c.l. 100 lbs. 9.27 - —
white, paper bgs., c.l. 100 lbs. 8.96 - —
paper bgs., l.c.l. 100 lbs. 9.11 - —

Corn dextrin in cotton bgs. 15c. per 100 lbs. higher.

Dextrose, anhyd., coml., bgs., c.l. 100 lbs. 8.65 - —
bgs., l.c.l. 100 lbs. 8.80 - —
Anhyd., special, aluminum foil lined fib. dms., 200-lb. dms 100 lbs.14.70 - —
100-lb. dms. 100 lbs.15.20 - —
Hydrated, coml., bgs., c.l., ex whse 100 lbs. 7.45 - —
bgs., c.l., ex whse 100 lbs. 7.60 - —
USP, dms. lb. .19¾- —
Diacetone alcohol, acetone-free, dms., c.l., dlvd. lb. .15½- —
dms., l.c.l., dlvd. lb. .17 - —
tanks, dlvd. lb. .13 - —
Tech., dms., c.l., dlvd. lb. .15 - —
dms., l.c.l., dlvd. lb. .16½- —
tanks, dlvd. lb. .12½- —
Diacetyl, flavor grade, bots. lb. 4.30 - 4.55
Di-sec-amyl phenol, dms., c.l., works lb. .32 - —
dms., l.c.l., works lb. .33 - —
tanks, works lb. .29½- —
Di-tert-amyl phenol, dms., c.l., works lb. .32 - —
dms., l.c.l., works lb. .33 - —
tanks, works lb. .29½- —
Diallylamine, dms., c.l., dlvd. lb. .98½- —
dms., l.c.l., dlvd. lb. 1.00 - —
tanks, dlvd. lb. .96 - —
o-Dianisidine, dry, tech., fib. dms. lb. 2.00 - —
Dibenzyl sebacate, dms., c.l., works, lb. .93 - —
dms., l.c.l., same basis lb. .94 - —
tanks, same basis lb. .91 - —
Dibromobenzene, bgs., 500-lb. lots, lb. .55 - —
2,6-Di-tert-butyl-p-cresol, feed grade, c.l., t.l., dms., dlvd. lb. .65 - —
l.t.l., dms., same basis lb. .68 - —
Food grade, c.l., t.l., dms., dlvd. lb. .65 - —
dms., l.t.l., same basis lb. .68 - 1.10
Tech., dms., c.l., t.l., dlvd. lb. .57 - —
dms., l.c.l., same basis lb. .60 - —
tanks, same basis lb. .54 - —
Dibutyl fumarate, dms., c.l., t.l., dlvd. E lb. .31½- —
dms., l.c.l., l.t.l., dlvd. E lb. .33 - —
tanks, dlvd. E lb. .29 - —
Dibutyl maleate, dms., c.l., t.l., dlvd. E lb. .31½- —
dms., l.c.l., l.t.l., dlvd. E lb. .33 - —
tanks, dlvd. E lb. .29 - —
Dibutyl phthalate, dms., c.l., dlvd. E lb. .31 - —
dms., l.c.l., same basis lb. .32½- —
tankcars, tanktrucks, 2,000 gals., same basis lb. .26 - —
tanktrucks, 1,000-1,999 gals., same basis lb. .26½- —
Dibutyl sebacate, dms., c.l., works, lb. .67½- —
dms., l.c.l., works lb. .68½- —
tanks, works lb. .65½- —
Dibutyl tartrate, dms., works, frt. alld lb. .65½- —
Dibutylamine, dms., c.l., dlvd lb. .55½- —
dms., l.c.l., same basis lb. .57 - —
tanks, same basis lb. .53 - —
Dicapryl phthalate, dms., c.l., dlvd, lb. .27½- —
dms., l.c.l., dlvd. lb. .29 - —
tanks, dlvd. lb. .25 - —
Dicapryl sebacate, dms., c.l., works, lb. .63 - —
dms., l.c.l., works lb. .63½- .64
tanks, works lb. .61 - —
2,5-Dichloroaniline, dms., works lb. .83 - —
3,4-Dichloroaniline, tech., solid, tanks, frt. alld lb. .73 - —
o-Dichlorobenzene, dms., c.l., frt. alld. E lb. .12¾- —
dms., l.c.l., same basis lb. .13¾- —
tanks, same basis lb. .11 - —
p-Dichlorobenzene, dms., c.l., f.o.b., works, frt. alld. E lb. .12 - —
dms. 2,000 lbs. or more, same basis lb. .14½- —
1,4-Dichlorobutane, dms., c.l., or t.l., works lb. .33½- —
dms., l.c.l., or l.t.l., works lb. .34 - —
tanks, works lb. .32 - —
Dichlorodiphenyltrichloroethane (see DDT).
2,2-Dichloroethyl ether, dms., c.l., t.l., dlvd. E lb. .15½- —
dms., l.c.l., l.t.l., same basis lb. .17 - —
tanks, same basis lb. .13 - —
Dichloroisocyanuric acid, dms., c.l., t.l., frt. equald lb. .65 - —
dms., l.c.l., same basis lb. .75 - —
Dichloropentanes, dist., dms., c.l., works lb. .05 - —
dms., l.c.l., works lb. .06 - —
tanks, works lb. .03 - —
Dichlorophenoxyacetic acid (see 2,4-D).
Dicyclohexylamine, dms., c.l., works, lb. .54 - —
dms., l.c.l., works lb. .55 - —
tanks, works lb. .52 - —
Dicyclohexyl phthalate, gran., fib. dms., c.l., works, frt. alld. lb. .46½- —
fib. dms., l.c.l., same basis lb. .48 - —
Dicyclopentadiene, dms., c.l., f.o.b. works lb. .14½- —
dms., l.c.l., same basis lb. .14¾- —
tanks, same basis lb. .12 - —
Didecyl phthalate, dms., c.l., works, lb. .28½- —
dms., l.c.l., same basis lb. .30 - —
tankcars, tanktrucks, 2,000 gals. lb. .26 - —
tanktrucks, 1,000-1,999 gals, same basis lb. .26½- —
Dieldrin, dms., c.l., dlvd. lb. 1.85 - —
dms., l.c.l. dlvd. lb. 1.90 - —
Diethanolamine, dms., c.l., dlvd. E. lb. .27 - —
dms., l.c.l., same basis lb. .28½- —
tanks, same basis lb. .24½- —
Diethanolamine lauryl sulfate, dms., c.l., frt. alld lb. .27½- —
dms., l.t.l., frt. alld. lb. .28½- —
tanks, frt. alld. lb. .26½- —
Diethyl barbituric acid (see Barbital).
Diethyl carbonate, dms., c.l., f.o.b. works lb. .47½- —
dms., l.c.l., same basis lb. .48½- —
tanks, same basis lb. .45 - —
Diethyl ethanolamines, dms., c.l., dlvd lb. .69½- —
dms., l.c.l., dlvd. lb. .71 - —
tanks, dlvd. lb. .67 - —
Diethyl oxalate, dms., c.l., f.o.b. works lb. .42½- —
dms., l.c.l., same basis lb. .43½- —
tanks, same basis lb. .40 - —
Diethyl phthalate, dms., c.l., dlvd. lb. .27½- —
dms., l.c.l., dlvd. lb. .29 - —
tanktrucks, 1,000-1,999 gals, same basis lb. .26½- —
tankcars, tanktrucks, 2,000-lb. lots, same basis lb. .26 - —
Diethyl sulfate, dms., c.l., works lb. .19½- —
dms., l.c.l., works lb. .20½- —
tanks, works lb. .17½- —
Diethyl thiourea, dms., c.l., t.l., works lb. .58 - —
dms., l.c.l., same basis lb. .59 - —
Diethyl toluamide, 90-95% meta isomer, dms., c.l., t.l., works, lb. 2.30 - —
5-44 dm. lots, works lb. 2.35 - —
1-4 dm. lots, works lb. 2.40 - —
N,N-Diethyl-m-toluidine, tech., liq., tanks, frt. alld lb. .83 - —
Diethylamine, dms., c.l., dlvd. E lb. .52 - —
dms., l.c.l., same basis lb. .53½- —
tanks, same basis lb. .49½- —
N,N-Diethylaniline, dms., c.l., frt. alld lb. .57 - —
dms., l.c.l., same basis lb. .58 - —
tanks, same basis lb. .55 - —
Diethylbenzene, dms., t.l., frt. alld. lb. .16½- —
Di-2-ethylhexyl adipate (see Dioctyl adipate).
Di-2-ethylhexyl phthalate (see Dioctyl phthalate).
Diethylene glycol, dms., c.l., dlvd. E. lb. .17¾- —
dms., l.c.l., same basis lb. .19¼- —
tanks, same basis lb. .15¼- —
Diethylene glycol diethyl ether, dms., c.l., works lb. .51½- —
dms., l.c.l., works lb. .52¼- —
Diethylene glycol monobutyl ether, c.l., dms., works lb. .30¾- —
dms., l.c.l., works lb. .32¼- —
tanks, dlvd. E. lb. .28¼- —
Diethylene glycol monobutyl ether acetate, dms., c.l., works, lb. .30¾- —
dms., l.c.l., works lb. .31½- —
tanks, dlvd. E. lb. .28¾- —
Diethylene glycol monoethyl ether, dms., c.l., dlvd lb. .22½- —
dms., l.c.l., dlvd. lb. .24 - —
tanks, dlvd. E. lb. .20 - —
Diethylene glycol monoethyl ether acetate, dms., c.l., works, lb. .27¼- —
dms., l.c.l., works lb. .28 - —
tanks, works lb. .25¼- —
Diethylene glycol monomethyl ether, dms., c.l., dlvd lb. .21 - —
dms., l.c.l., dlvd. lb. .22½- —
tanks, dlvd. E. lb. .18½- —
Diethylenetriamine, dms., c.l., dlvd. E lb. .44 - —
dms., l.c.l., dlvd. E lb. .45½- —
tanks, dlvd. E lb. .41½- —
Diethylstilbesterol, USP, bots., 10-kilo lots kilo.100.00 -147.50
bots, 1-kilo lot kilo.110.00 -152.50
Digitalis leaves, USP, dom., dms lb. 1.25 - —
Digitoxin, USP, bots. gram. 4.20 - —
Diglycol laurate, dms. lb. .32¾- .34
Diglycol stearate, dms., ton lots lb. .26 - .28
Diglycolic acid, bgs., c.l., t.l., works, lb. .15½- —
bgs., l.c.l., works lb. .16 - —
Dihexyl sebacate, dms., c.l., works, lb. .66 - —
dms., l.c.l., works lb. .67 - —
tanks, works lb. .64 - —
Dihydrazine sulfate, dms., works lb. 1.10 - 1.25
Dihydrostreptomycin sulfate, bulk, gram. .035 - .036
1,2-Dihydroxy anthraquinone, dms., works lb. 3.45 - —
2,2-Dihydroxy-5-5-dichloro-diphenyl-methane, pure, dms lb. 2.55 - —
Tech., dms., 20,000 lbs. or more lb. 1.11 - —
dms., 1,050 lbs. to 20,000 lbs. lb. 1.13 - —
dms., 150 lbs. to 1,050 lbs lb. 1.15 - —
Di-isobutyl ketone, dms., c.l., dlvd. alld lb. .17 - —
dms., l.c.l., dlvd. lb. .18½- —
tanks, dlvd lb. .14½- —
Di-isobutyl phthalate, dms., c.l., dlvd. E. lb. .31½- —
dms., l.c.l., same basis lb. .32½- —
tanks, same basis lb. .29 - —
Di-isobutylene, dms., c.l., dlvd. E lb. .10 - —
dms., l.c.l., dlvd. E lb. .11½- —
tanks, dlvd. E. lb. .08 - —
Di-iso-octyl phthalate, dms., c.l., dlvd lb. .28½- —
dms., l.c.l., same basis lb. .30 - —
tanktrucks, 1,000-1,999 gals., dlvd. lb. .26½- —
tankcars, tanktrucks, 2,000 gals., dlvd lb. .26 - —
Di-iso-octyl sebacate, dms., c.l., works lb. .62 - —
dms., l.c.l., works lb. .62½- .63
tanks, works lb. .60 - —
Di-isopropanolamine, dms., c.l., dlvd. lb. .23¼- —
dms., l.c.l., same basis lb. .24¾- —
tanks, same basis lb. .20¾- —
Di-isopropylamine dms., c.l., dlvd. E. of Rockies lb. .50½- —
dms., l.c.l., same basis lb. .52 - —
tanks, same basis lb. .48 - —
Dillweed oil, dom., bots., dms lb. 3.75 - 4.80
Dimethyl anthranilate, cns. lb. 4.15 - —
Dimethyl dichlorovinyl phosphate, 55-gal. dms., dlvd lb. 3.50 - —
Dimethyl ethanolamines, anhyd., dms., c.l. dlvd lb. 1.225 - —
dms., l.c.l., dlvd. lb. 1.235 - —
tanks, dlvd. lb. 1.20 - —
70% dms., c.l., dlvd., 100% basis, contained amines lb. .68½- —
dms., l.c.l., dlvd., 100% basis, lb. .69½- —
tanks, dlvd., 100% basis lb. .66 - —
Dimethyl hydroquinone, dms. lb. 1.90 - 2.20
Dimethyl phthalate, dms., c.l., works lb. .28½- —
dms., l.c.l., works lb. .30 - —
tanktrucks, 1,000-1,999 gals., same basis lb. .26½- —
tankcars, tanktrucks, 2,000 gals., same basis lb. .26 - —
Dimethyl sebacate, dms., c.l., works, lb. 1.31 - —
dms., l.c.l., works lb. 1.30 - —
tanks, works lb. 1.28 - —
Dimethyl sulfate, ret. dms., c.l., works lb. .17½- —
ret. dms., l.c.l., works lb. .18½- —
tanks, works lb. .16½- —
Dimethyl sulfide, dms., c.l., works, lb. .18 - —
dms., l.c.l., works lb. .18½- —
tanks, works lb. .15 - —
Dimethylamine, 25% soln., dms., c.l., frt. equald, 100% basis lb. .38 - —
dms., l.c.l., frt. equald, 100% basis lb. .38½- —
tanks, frt. equald, 100% basis, lb. .28 - —
40% soln., dms., c.l., frt. equald, 100% basis lb. .35 - —
dms., l.c.l., frt. equald, 100% basis lb. .35½- —
tanks, frt. equald, 100% basis, lb. .28 - —
N,N-Dimethylaniline, dms., c.l., frt. alld lb. .28 - —
dms., l.c.l., same basis lb. .29 - —
tanks, same basis lb. .26 - —
N,N-Dimethylformamide, dms., c.l., t.l., works lb. .32½- —
dms., l.c.l., works lb. .33 - .34
tanks, works lb. .30 - —
2,4-Dinitroaniline, dms., frt. alld lb. .75 - —
Dinitroaniline orange toner, CP, bbls., dlvd. E. of Rockies, lb. 1.56 - —

Dinitroaniline orange toner prices 1c higher W. of Rockies.

m-Dinitrobenzene, 89°C., dms. lb. .26 - —
2,4-Dinitrochlorobenzene, crystallizing at 46½°C., dms., c.l., frt. alld. E lb. .17¼- —
dms., l.c.l., frt. alld. E. lb. .17¾- —
tanks, frt. alld. E. lb. .17 - —
2,4-Dinitrophenol, bbls. lb. .41 - —
2,4-Dinitrotoluene, oil, dms. lb. .11 - —
Refd., 63°C., dms. lb. .23 - —
Dioctyl adipate, dms., c.l., works lb. .42½- —
dms., l.c.l., works lb. .43½- —
tanks, works lb. .40 - —
Dioctyl phthalate, dms., c.l., frt. alld lb. .28½- —
dms., l.c.l., frt. alld lb. .30 - —
tanktrucks, 1,000-1,999 gals., same basis lb. .25½- —
tankcars, tanktrucks, 2,000 gals., same basis lb. .25 - —
Dioctyl sebacate, dms., c.l., works, lb. .61¼- —
dms., l.c.l., works lb. .62¼- —
dms., l.c.l., works lb. .62¼ —
tanks, works, dlvd. lb. .59¼- —
1,4-Dioxane, dms., c.l., dlvd. E lb. .31½- —
dms., l.c.l., dlvd. E lb. .33 - —
tanks, dlvd. E. lb. .29 - —

Prices in the west are 2c. per lb. higher.

Dipentaerythritol, bgs., c.l., t.l., dlvd. E lb. .40 - —
bgs., l.c.l., t.t.l., dlvd. E. lb. .41 - —
Dipentene, dest.-dist., dms., c.l., works gal. .58 - —
dms., l.c.l., works lb. .62 - —
dms., l.c.l., ex whse. gal. .78 - —
tankscars, works gal. .41 - —
Steam dist., dms., c.l., works, South gal. .72 - —
dms., l.c.l., dlvd. New York gal. .91 - —
tanks, works, South lb. .55 - —
Dip oil (see Tar acid oil).
Diphenolic acid, 1,000-lb. or more, bgs., works lb. .75 - —
Diphenolic polyether acids, 1,000-lb. or more, bgs., works lb. 1.00 - —
Diphenyl, bgs., c.l., t.l., works lb. .16¾- —
bgs., l.c.l., works lb. .18½- —
tanks, works lb. .15¾- —
Diphenyl oxide, perfume grade, cns. lb. .55 - .70
Diphenyl phthalate, dms., c.l., works, lb. .51¾- —
dms., l.c.l., works lb. .53¾- —
Diphenylamine, refd., flake, bgs., c.l., works, frt. equald lb. .31 - —
bgs., l.c.l., same basis lb. .33 - —
Refd., fused, tanks, same basis lb. .28 - —

Refd., diphenylamine in dms., ½c. per lb. higher.

Diphenylguanadine bgs., dms., ton lots, frt. alld lb. .49 - —
bgs., smaller lots frt. alld lb. .50 - —
Diphenylhydantoin-sodium, USP, dms lb. 5.00 - 5.60
Dipropylene glycol, dms., c.l., frt. alld lb. .17 - —
dms., l.c.l., frt. alld. lb. .18½- —
tanks, frt. alld. lb. .14¼- —
Dipropylene glycol methyl ether, dms., c.l., dlvd. E lb. .20 - —
dms., l.c.l., same basis lb. .21½- —
tanks, same basis lb. .18½- —
Dithiodibenzoic acid, dms., 1,000-lb. lots, works lb. 1.45 - —
Di-o-tolylguanidine, dms., ton lots, frt. alld lb. .69 - —
dms., smaller lots, frt. alld lb. .70 - —
Di-o-tolylthiourea, tech., solid, dms., c.l., t.l., frt. alld lb. .55 - —
Divinylbenzene, 20-25%, dms., c.l., works, frt. equald lb. .20 - —
dms., l.c.l., same basis lb. .21 - —
tanks, same basis lb. .19 - —
50-60%, dms., c.l., works, 100% basis lb. 1.00 - —
dms., l.c.l., works, 100% basis, lb. 1.05 - —
tanks, same basis lb. .90 - —
Dodecenyl succinic anhydride, dms., c.l., t.l., dlvd. E lb. .75 - —
dms. l.c.l., l.t.l., same basis lb. .76 - —
Dodecylbenzene, dms., c.l., f.o.b., works, frt equald lb. .134 - —
dms., l.c.l., same basis lb. .144 - —
tanks, same basis lb. .11 - —
Dodecylphenol, c.l., frt. alld. lb. .22 - —
dms., l.c.l., same basis lb. .23 - —
tanks, same basis lb. .19½- —

Dodecylphenol prices on shipments to Western States are 2c. per pound higher.

Dyes, coaltar, certified colors for food, drugs and cosmetics, 500-lb. and 1-lb. lots, dlvd.:
Blue, FD&C, No. 1 lb.15.65 -17.60
No. 2 lb.15.65 -17.60
Green, FD&C, No. 1 lb.15.65 -17.60
No. 2 lb.19.60 -22.85
No. 3 lb.31.30 -35.90
Red, FD&C, No. 1 lb. 5.90 - 7.85
No. 2 lb. 3.30 - 4.10
No. 3 lb.19.60 -22.85
No. 4 lb. 5.55 - 7.50
Violet, FD&C, No. 1 lb.15.65 -17.60
Yellow, FD&C, No. 1 lb. 9.15 -11.05
No. 5 lb. 3.30 - 4.10
No. 6 lb. 3.30 - 4.10
Dyes, coaltar, certified colors for drugs and cosmetics, 200-lb. and 1-lb. lots, dlvd.:
Black, D&C, No. 1 lb.10.50 -10.95
Brown, D&C, No. 1 lb.15.65 -16.10
Green, D&C, No. 5 lb.15.65 -16.10
No. 6 lb.15.65 -16.10
No. 7 lb.14.35 -14.80
Orange, D&C, No. 3 lb.10.50 -10.95
No. 4 lb.19.60 -20.05
No. 5 lb. 3.80 - 4.25
Red, D&C, No. 17 lb.10.50 -10.95
No. 18 lb.23.60 -24.00
No. 19 lb.15.00 -15.45
No. 21 lb. 3.90 - 4.35
No. 22 lb.10.50 -10.95
No. 28 lb.24.15 -24.65
No. 33 lb.17.00 -17.45
Violet, D&C, No. 2 lb.15.65 -16.10

**Dyes, coaltar, certified color for drugs and cosmetics, 200 lbs. and 1 lb. lots, dlvd:—**
Yellow, D&C, No. 7 ..... lb. 10.50 - 10.95
No. 8 ..... lb. 10.50 - 10.95
No. 10 ..... lb. 13.05 - 13.50
No. 11 ..... lb. 13.05 - 13.50

**Dyes, coaltar, certified colors for drugs and cosmetics, external use, 500-lb. and 1-lb. lots, dlvd.:**
Blue, Ext., D&C, No. 1 ..... lb. 15.65 - 16.10
Green, Ext., D&C, No. 1 ..... lb. 15.65 - 16.10
Red, Ext., D&C, No. 1 ..... lb. 13.05 - 13.50
Yellow, Ext, D&C, No. 1 ..... lb. 10.50 - 10.95

**Dyes, coaltar for general use in cloth dyeing (numbers are those of the Color Index scale or prototype), contract dlvd. No.**
11110 Brilliant scarlet BN ..... lb. 1.79 • —
13390 Fast blue 5R ..... lb. 1.43 • —
14025 Yellow 2G ..... lb. 1.26 • —
14030 Orange R, extra, conc. ..... lb. 1.64 • —
14645 Chrome black T ..... lb. .77 • —
14720 Rubine XX, conc. ..... lb. 1.59 • —
15510 Orange Y, extra conc. ..... lb. .83 • —
15575 Orange RR ..... lb. .99 • —
15620 Fast Red A, conc ..... lb. 1.61 • —
15705 Chrome blue black R, conc. ..... lb. 1.12 • —
16150 Scarlet 2RL ..... lb. 1.22 • —
16255 Brilliant scarlet 3RN, conc. ..... lb. 1.26 • —
16230 Fast light, orange 2G ..... lb. 1.39 • —
17590 Brown PG ..... lb. 3.00 • —
18050 Phloxine 2G ..... lb. 1.05 • —
18055 Fuchsine 6B ..... lb. 1.55 • —
18965 Fast yellow 2G ..... lb. 2.32 • —
19140 Yellow XX ..... lb. 2.48 • —
19555 Yellow NN, conc. ..... lb. 3.67 • —
20170 Brown Y ..... lb. 1.33 • —
20470 Blue black, extra, conc. ..... lb. 1.44 • —
21010 Brown, RX, conc. ..... lb. 1.35 • —
22240 Scarlet B ..... lb. 2.81 • —
22310 Red FC ..... lb. 1.57 • —
22311 Brown MCW ..... lb. 1.47 • —
22610 Blue 2B, extra conc. ..... lb. 1.53 • —
23500 Red, 4BX, conc. ..... lb. 1.80 • —
24410 Sky blue FF, extra, conc. lb. 1.95 • —
24895 Brilliant yellow, conc. ..... lb. 3.27 • —
26360 Navy blue 3R, conc. ..... lb. 1.84 • —
26695 Black F, conc. ..... lb. 2.30 • —
26900 Milling Red 3R, conc ..... lb. 2.24 • —
27075 Neutral black 2B, conc ..... lb. 2.75 • —
27720 Gray L ..... lb. 2.18 • —
29185 Fast scarlet 4BNC ..... lb. 2.23 • —
30015 Diazo black VJ conc. ..... lb. 2.48 • —
30045 Yellow brown K, extra ..... lb. 1.26 • —
30235 Black EB, 200% ..... lb. 1.33 • —
30295 Green BY, conc. ..... lb. 1.07 • —
35660 Brown B ..... lb. 2.89 • —
37565 Naphthol SWF ..... lb. 1.85 • —
40000 Yellow 2G ..... lb. 1.44 • —
41000 Yellow OX ..... lb. 2.45 • —
42000 Green V, crystals ..... lb. 2.73 • —
42040 Brilliant green G crystals. lb. 3.62 • —
42090 Blue EG ..... lb. 1.85 • —
42100 Milling green 6B, conc. ..... lb. 4.78 • —
42640 Violet 4BXN ..... lb. 2.43 • —
43830 Brilliant blue, BBG ..... lb. 2.44 • —
44045 Blue B, extra conc. ..... lb. 3.61 • —
45170 Red BX ..... lb. 4.76 • —
50415 Nigrosine SSJ ..... lb. 1.03 • —
52015 Blue GXX ..... lb. 2.33 • —
58005 Alizarin red SC ..... lb. 3.64 • —
59700 Golden orange GFD, single paste ..... lb. 2.70 • —
59710 Flaming orange 6RD double powder ..... lb. 4.90 • —
59800 Dark blue BO, single paste. ..... lb. 2.28 • —
59825 Jade green NC supra, double paste ..... lb. 1.50 • —
61570 Alizarin green CG, extra lb. 3.81 • —
63010 Alizarin blue SAPG ..... lb. 3.90 • —
63615 Alizarin blue black B ..... lb. 3.26 • —
69825 Blue BLFD double paste lb. 2.82 • —
70305 Brown BR single paste ..... lb. 2.03 • —

**Dyes, coaltar, oil-soluble, 100-lb. drums, dlvd. No.**
12140 Oil scarlet BL ..... lb. 1.87 • —
12055 Oil orange 7078 V ..... lb. 1.38 • —
26120 Oil red N 1700 ..... lb. 1.94 • —
42535B Methyl violet base ..... lb. 1.88 • —
44045B Victoria blue base ..... lb. 4.06 • —
50415B Oil black 8603 ..... lb. .80 • —
61565 Alizarin cyanine green base. ..... lb. 6.13 • —
Spirit black RB ..... lb. 3.89 • —
Spirit brown GN ..... lb. 5.30 • —
Spirit orange R conc. ..... lb. 5.87 • —
Spirit red B conc ..... lb. 6.41 • —
Pr. 517 Spirit yellow 2R conc. lb. 4.62 • —
Pr. 554 Spirit blue THN ..... lb. 5.06 • —

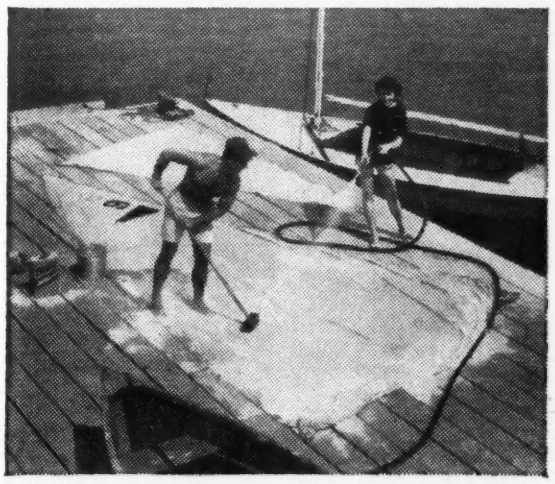
## E

Echinacea root, bls. ..... lb. 1.25 • —
Elm bark, grinding, bls. ..... lb. .30 • .32
Powd., bbls., bxs ..... lb. .60 • —
Select, bundles ..... lb. .75 • —
Emetine hydrochloride, USP, bots. ..... oz. 48.40 • —
Endrin, tech., dms., 100-lbs. or more, 100% basis, dlvd. lb. 2.70 • —
Eosin red toner, bbls., works ..... lb. 1.95 • —
Ephedrine, syn., USP, anhyd., bots. 100-oz. lots ..... oz. .98 • 1.00
hydrous, bots., 100-oz. lots. ..... oz. .92 • —
Ephedrine hydrochloride, NF, dms., 100-oz. f.o.b. works ..... oz. .72 • —
Ephedrine sulfate, USP, cryst., dms., 100-oz. f.o.b. works ..... oz. .73 • —
USP, powd., dms., 100-oz., same basis ..... oz. .73 • —
Epichlorohydrin, dms., c.l., dlvd. lb. .29½ • —
dms., l.c.l., dlvd. ..... lb. .31 • —
tanks, dlvd. ..... lb. .27 • —
l-Epinephrine base, syn., USP, bots., 100 gram lots gram. .58 • —
Epsom salt (see Magnesium sulfate).
Erigeron oil, cns. ..... lb. 11.00 • —
Ergot, NF, dms., tin-lined ..... lb. 1.00 • 1.25
Eserine salicylate, bots. ..... oz. 44.00 • —
Eserine sulfate, bots. ..... oz. 86.00 • —
Ester gum, gum-rosin type, dms., c.l., dlvd., Ill., Md., Ky., E. States, Minneapolis, N. C., Ohio, St. Louis, St. Paul, Va., W. Va. lb. .18½ • —
Wood-rosin type, dms., c.l., same basis ..... lb. .18½ • —
Ether (see specific product).
Ethyl acetate, nat., ferment. 85-88%, dms., c.l., dlvd. lb. .15 • —
dms., l.c.l., dlvd. ..... lb. .16½ • —
tanks, dlvd. ..... lb. .12½ • —
95-98%, dms., c.l., dlvd. lb. .15¼ • —
dms., l.c.l., dlvd. ..... lb. .16¾ • —
tanks, dlvd. ..... lb. .12¾ • —
Ethyl acetate, nat., ferment. 99%, dms., c.l., dlvd. lb. .15½ • —
dms., l.c.l., dlvd. ..... lb. .17 • —
tanks, dlvd. ..... lb. .13 • —
syn., 85-88%, dms., c.l., dlvd. lb. .15 • —
dms., l.c.l., dlvd. ..... lb. .16½ • —
tanks, dlvd. ..... lb. .12½ • —
Ethyl acetate, syn., 95-98%, dms., c.l., dlvd. lb. .15¼ • —
dms., l.c.l., dlvd. ..... lb. .16¾ • —
tanks, dlvd ..... lb. .12¾ • —
99%, dms., c.l., dlvd. ..... lb. .15½ • —
dms., l.c.l., dlvd. ..... lb. .17 • —
tanks, dlvd. ..... lb. .13 • —
Ethyl acetoacetate, dms., c.l., dlvd. ..... lb. 58½ • —
dms., l.c.l., dlvd. ..... lb. .60 • —
tanks, dlvd. ..... lb. .56 • —
Ethyl acrylate, dms., c.l., t.l., dlvd. ..... lb. .36 • —
dms., l.t.l., dlvd. ..... lb. .37 • —
tanks, dlvd. ..... lb. .34 • —

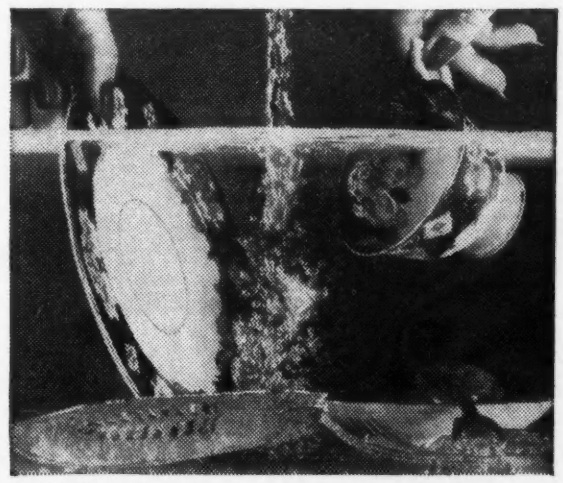
Ethyl alcohol, 190 pf., USP, tax paid dms., c.l., dlvd. E. of Rockies ..... gal. 20.63 • —
dms., l.c.l., same basis ..... gal. 20.73 - 20.84
Ethyl alcohol, 190 pf., USP, tax-free, dms., c.l., dlvd. E. of Rockies ..... gal. .52 • —
dms., l.c.l., same basis ..... gal. .78 • .89
tanks, same basis ..... gal. .52 • —
Ethyl alcohol, absolute, 200 pf., tax paid, dms., dlvd. E. of Rockies ..... gal. 21.75 • —
dms., l.c.l., same basis ..... gal. 21.85 - 21.96
tanks, same basis ..... gal. 21.59 • —
Ethyl alcohol, denatured (see Denatured alcohol, ethyl).
Ethyl aminobenzoate, USP (see Benzocaine).
Ethyl amyl ketone, dms., c.l., dlvd. ..... lb. .20 • —
dms., l.c.l., same basis ..... lb. .21½ • —
tanks, same basis ..... lb. .17½ • —
Ethyl benzoate, bots. ..... lb. .75 • 1.00
Ethyl bromide, tech., 98%, dms., c.l., frt. alld. E. lb. .43 • —
dms., l.c.l., frt. alld. E. lb. .45 • —
tanks, frt. alld. E. ..... lb. .41 • —
Ethyl butyl ketone, dms., c.l., t.l., works lb. .36 • —
dms., l.c.l., t.l. works ..... lb. .36¾ • —
tanks, works ..... lb. .34 • —
Ethyl butyrate, dms., works ..... lb. .85 • 1.00
Ethyl carbamate (see Urethane).
Ethyl cellulose, vis. 7 cps., bgs., 5,000-lb. lots or more, frt. alld. E lb. .73 • —
bgs., smaller lots, frt. alld. E lb. .75 • —
Vis. 10, 20, 50, 100, 150 cps., bgs., 5,000-lb. lots or more, frt. alld. E lb. .68 • —
bgs., smaller lots, frt. alld. E. lb. .70 • —

Ethyl chloride, tech., cyls., works. ..... lb. .20 • .22
dms., works ..... lb. .18 • .20
tanks, works ..... lb. .10 • —
Ethyl cinnamate, cns. ..... lb. 3.35 - 3.50
Ethyl ethanolamies, mixed, dms., c.l., dlvd. E. lb. .43½ • —
dms., l.c.l., dlvd. E. ..... lb. .44½ • —
tanks, dlvd. E. ..... lb. .41½ • —
Ethyl ether, absolute, ACS, dms. lb. .27 • —
Anesthesia, USP, dealers, 1-lb. cns. lb. 1.01 • —
½-lb. cns ..... lb. 1.09 • —
¼-lb. cns. ..... lb. 1.21 • —
Indust., dms., c.l., dlvd. ..... lb. .13½ • —
dms., l.c.l., dlvd. E. ..... lb. .15 • —
tanks, dlvd E. ..... lb. .11 • —
2-Ethyl hexoic acid, dms., c.l., t.l., dlvd. E lb. .37 • —
dms., l.c.l., t.t.l., dlvd. E. ..... lb. .38½ • —
tanks, dlvd. E. ..... lb. .34½ • —
2 Ethyl hexoic acid, 1c. higher W. of Rockies.
2-Ethyl hexyl acrylate, dms., c.l. t.l., straight or mixed frt. alld. E lb. .42½ • —
dms., l.t.l., same basis ..... lb. .43½ • —
tanks, same basis ..... lb. .40 • —
Prices of 2-ethylhexyl acrylate are 1½c. per lb. higher in Ariz., Calif., Idaho, Nev., Ore., Utah and Wash.
2-Ethylhexyl alcohol, dms., c.l., dlvd. ..... lb. .23¾ • —
dms., l.c.l. dlvd ..... lb. .25¼ • —
tanks, dlvd. ..... lb. .21¼ • —

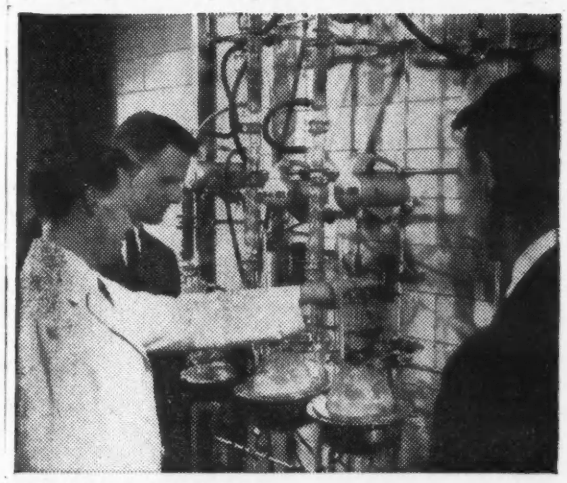
Ethyl iodide, cbys., works ..... lb. 3.30 • —
Ethyl methacrylate, dms., c.l., frt. equald lb. .52 • —
dms., l.t.l., frt. equald ..... lb. .52½ • —
tanks, frt. equald ..... lb. .50 • —
Ethyl morphine hydrochloride, USP, bots oz. 11.85 • —
Ethyl oenanthate, dms ..... lb. 1.05 • 1.30
Ethyl oxalate (see Diethyl oxalate).
Ethyl silicate, dist. (see Tetraethyl orthosilicate).
Ethyl silicate, 40% available $SiO_2$, dms., c.l., dlvd lb. .44½ • —
dms., l.c.l., dlvd ..... lb. .46 • —
tanks, dlvd ..... lb. .42 • —
N-Ethyl-a-naphthylamine, dms., works. ..... lb. 1.04 • —
N-Ethyl-m-toluidine, tech., liq., tanks, frt. alld lb. .83 • —
N-Ethyl-o-toluidine, bbls ..... lb. .88 • —
Ethylamine (see Mono-, Di-, or Tri-)
N-Ethylaniline, dms., c.l., frt. alld. ..... lb. .57 • —
dms., l.c.l., frt. alld ..... lb. .58 • —
tanks, frt. alld ..... lb. .55 • —
Ethylbenzene, 99%, dms., c.l., t.l., frt. equald lb. .15 • —
dms., l.c.l., same basis ..... lb. .17 • —
tanks, same basis ..... lb. .12½ • —
2-Ethylbutyl alcohol, dms., c.l., works lb. .30 • —
dms., l.c.l., works ..... lb. .30¾ • —
tanks, works ..... lb. .28 • —
Ethylene, contract, refy. gate ..... lb. .0475- .0525
Ethylene dibromide, dms., c.l., frt. equald lb. .30½ • —
dms., l.c.l., frt. equald ..... lb. .31½ • —
tanks, frt. equald ..... lb. .28½ • —



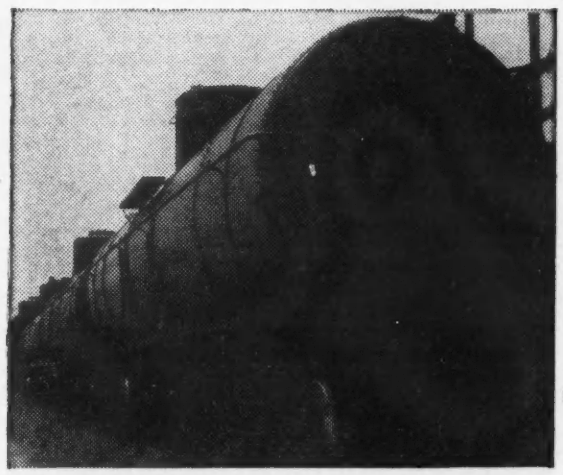
**ENJAY OLEFINS**—Enjay markets tetrapropylene, tripropylene and nonene. These chemicals fulfill the most rigid requirements as raw materials for anionic and nonionic detergents. Uniform purity and high quality contribute to the modern detergent's ability to get hard-to-wash surfaces cleaner.



**TRIDECYL ALCOHOL**—Water soluble nonionic surface active agents formed by the reaction of tridecyl alcohol with ethylene oxide are extremely well suited for use as household detergents. Surfactants made with tridecyl alcohol help increase penetrating power and loosen dirt.



**TECHNICAL ASSISTANCE**—At the Enjay laboratories, expert technical assistance and the latest testing facilities are available. Here, Enjay technical personnel can help you develop new products and improve existing ones.



**QUICK SHIPMENTS**—Shipments are made from conveniently located plant and storage facilities. Surfactant manufacturers are assured of prompt delivery and high uniform product quality when they order from Enjay.

# HOW ENJAY SERVES...the surfactants industry

Enjay offers the surfactants industry the following high quality materials for all types of detergents, wetting agents, emulsifiers, sanitizers and foam control agents: Tetrapropylene • Tripropylene • Nonene • Tridecyl Alcohol • Decyl Alcohol • Isooctyl Alcohol • Isopropyl Alcohol • Benzene. For technical assistance or to order Enjay chemicals contact the nearest Enjay office.

HOME OFFICE: 15 West 51st Street, New York 19, New York.
OTHER OFFICES: Akron • Boston • Charlotte • Chicago • Detroit • Houston • Los Angeles • New Orleans • Tulsa

EXCITING NEW PRODUCTS THROUGH PETRO-CHEMISTRY

**ENJAY CHEMICAL COMPANY**
A DIVISION OF HUMBLE OIL & REFINING COMPANY

ENJAY
PETROCHEMICALS

## Ethylene Dichloride—Grapefruit Oil

Ethylene dichloride, dms., c.l., dlvd. lb. .11½- —
dms., l.c.l., same basis lb. .13 - —
tanks, same basis lb. .09 - —

Ethylene dichloride prices W. of Rockies, 1c. per lb. higher.

Ethylene glycol, indust., dms., c.l., dlvd. E lb. .16 - —
dms., l.c.l., same basis lb. .17½- —
tanks, same basis lb. .13½- —

Ethylene glycol monobutyl ether, dms., c.l., dlvd. E lb. .22 - —
dms., l.c.l., dlvd. E lb. .23½- —
tanks, dlvd. E lb. .19½- —

Ethylene glycol monoethyl ether, dms., c.l., dlvd. E lb. .21 - —
dms., l.c.l., dlvd. E lb. .22½- —
tanks, dlvd. E lb. .18½- —

Ethylene glycol monoethyl ether acetate, dms., c.l., dlvd. E lb. .19½- —
dms., l.c.l., dlvd. E lb. .20½- —
tanks, dlvd. E lb. .17 - —

Ethylene glycol monomethyl etner, dms., c.l., dlvd. E lb. .21 - —
dms., l.c.l., dlvd. E lb. .22½- —
tanks, dlvd. E lb. .18½- —

Ethylene glycol monomethyl ether acetate. dms., c.l., dlvd. E lb. .29 - —
dms., l.c.l., dlvd. E lb. .29¾- —
tanks, dlvd. E lb. .27 - —

Ethylene glycol monostearate, triple pressed, dms lb. .33 - .35

Ethylene oxide, dms., c.l., dlvd. E. lb. .21½- —
dms., l.c.l., dlvd. E lb. .24½- —
tanks, dlvd. E lb. .15½- —

Ethylene trichloride (see Trichloroethylene).

Ethylenediamine, 85-88%, dms., c.l., dlvd. E., 100% basis lb. .42 - —
dms., l.c.l., dlvd. E., 100% basis. lb. .43 - —
tanks, dlvd. E., 100% basis lb. .40 - —
lots and over lb. 6.75 - —
200-lb. lots and over lb. 7.00 - —
100-lb. lots and smaller lb. 7.30 - 7.40

Ethylvanillin, 100-lb. fib. dms., 500-lb.

Eucalyptol, USP, cns., dms lb. .85 - 1.40

Eucalyptus oil, NF, rectified, 70-75%, dms lb. .44 - .55
NF, rectified, 80-85%, dms. lb. .53 - .62

Eugenol, tech., dms lb. 1.45 - —
USP, dms. lb. 2.00 - —

Euphorbia herb, bls. lb. .12 - .15

## F

F salt paste, tech. dms., works lb. 2.30 - —

Feldspar, 140-200 mesh, bulk, c.l., works ton.19.50 - —
Feldspar in bags $3 per ton higher

Fennel oil, sweet, USP, cns lb. 1.95 - 2.25

Fennel seed, Argentine, bgs lb. .16 - —
French, light, bgs lb. .16 - —
Indian, light, bgs lb. .17½- —
Rumanian, bgs. lb. .14 - —
Yugoslav, light, bgs lb. .16½- —

Fenugreek seed, Moroccan, bgs lb. .08 - —

Ferric chloride, anhyd., tech., dms., c.l., works 100 lbs. 7.50 - —
dms., l.c.l., works 100 lbs. 8.50 - —

Ferric chloride, indust., cryst., bbls., c.l., works 100 lbs. 5.25 - 6.75
bbls., l.c.l., works 100 lbs. 5.75 - 7.25
42° Be., photo grade, cbys., c.l., sewage grade, tanks, frt. equald. 100% basis 100 lbs. 4.00 - —
USP, cryst., dms., t.l., works lb. .08½- —

Ferric citrate gran., dms lb. .86 - —

Ferric hypophosphite, NF, dms lb. 3.45 - —

Ferric naphthenate, liq., 6% Fe, dms., frt. alld lb. .28¼- —

Ferric oxalate, tech., gran., 50-lb. dm., f.o.b. works E lb. .89 - —

Ferric oxides (see iron oxides).

Ferric phosphate, NF, soluble, gran. pearls, cs lb. .72 - .75

Ferric pyrophosphate, NF VII, soluble, gran., pearls, dms.lb. .70 - —

Ferric resinate, 6¾% Fe., dms., ton lots, frt. ald lb. .40¼- —

Ferric stearate, dms., c.l., frt. alld. lb. .39 - —
dms., l.c.l., frt. alld lb. .40 - .44

Ferric sulfate, partly hydrated, bgs., c.l., works ton.35.25 - —
bgs., l.c.l., works ton.36.25 -42.25
bulk, c.l., works ton.33.25 - —

Ferric-ammonium citrate, brown, pearls, NF, gran., dms lb. .65 - .68
Green pearls, USP XII, gran., dms lb. .66 - .69

Ferric-ammonium oxalate, fine gran., dms lb. .27½- .29½

Ferric-potassium oxalate, fine gran., dms lb. .32½- .34½

Ferric-sodium oxalate, fine gran., dms lb. .27½- .29½

Ferrous gluconate, USP, 200-lb. dm., frt. equald lb. .96 - —

Ferrous sulfate, gran., bgs., c.l., works ton.34.50 - —
bgs., l.c.l., dlvd. Metropolitan area 100 lbs. 3.35 - 4.25
bbls., c.l., works ton.40.00 - —
bulk, c.l., works ton.27.00 - —
USP, cryst., bbls., dms lb. .09½- .10

Fir balsam, Canada, bbls. gal.32.00 -35.00
Oregon, bbls gal. 3.40 - 4.64

Fir oil, Canada, cns lb. 1.75 - 2.50

Fish oil, refd., alkali, dms lb. .1250- .1300
Kettle-bodied, dms, lb. .1480- .1530
Light-pressed, dms. lb. .1100- .1150
tanks lb. .09½- —

Fishliver oil, nat., high potency, 100,000 to 1,500,000 A units per gram, dms 1,000,000 units. .12 - —

Fishmeal, dom., menhaden, 60% protein, grd., bgs., Atlantic and Gulf coasts ton.92.00 - —

Fishscrap, dom., menhaden, dried, 60% protein, grd., bgs., Atlantic and Gulf coasts ton.88.00 - —

Fleaseed (see Psyllium seed).

Folic acid, USP, bots., fib. dms., kilo lots or more gram .30 - .44
10% feed grade, fib. dms., 3 kilos or more kilo.30.00 -44.00

Formaldehyde, 37% (inhibited, 12 to 15% methanol), USP, dms., c.l., dlvd lb. .0695- —
tanks, dlvd. lb. .0430- —

Formaldehyde, methanol-free (uninhibited), tanks, dlvd lb. .0375- —

Formic acid, 85%, cbys., c.l., works. lb. .1570- —
cbys., l.c.l., works lb. .1620- .1720
90%, cbys., c.l., works lb. .1625- —
cbys., l.c.l., works lb. .1675- .1775

Fringetree bark, bls. lb. .60 - .70

Fumaric acid, tech., 250-lb. dms., c.l., frt. equald lb. .23¼- —
dms., l.c.l., frt. equald lb. .24¼- —

Fumaric acid in bags ½c. per lb. less.

Furfural, dms., c.l., works lb. .13 - —
dms., l.c.l., works lb. .14 - —
tanks, dlvd. E lb. .11½- —
tanks, dlvd. W lb. .12½- —

Furfuryl alcohol, cns., works lb. .28 - —
dms., c.l., t.l., Newark, N. J lb. .20½- —
dms., l.c.l., l.t.l., Newark, N. J lb. .21½- —
dms., c.l., t.l., Memphis, Tenn lb. .19 - —
dms., l.c.l., l.t.l., Memphis, Tenn lb. .20 - —
tanks, Memphis, Tenn. lb. .175 - —

Fusel oil, refd., dms., c.l., dlvd lb. .18 - —
dms., l.c.l., dlvd. lb. .19½- —
tanks, dlvd. lb. .15½- —

## G

G salt, bbls., frt. alld., 100% basis.lb. .73 - —

Gallic acid, NF, VII, bbls., 1,000-lb. lots lb. 2.00 - —
bbls., smaller lots lb. 2.02 - 2.22
Tech., bbls., 1,000-lb. lots lb. 1.78 - —
bbls., smaller lots lb. 1.80 - 2.00

Gamma acid, dry grd., bbls., frt. alld lb. 1.75 - —

Gammapicoline (see g-picoline).

Garlic oil, dom., bots. oz. 4.75 - 6.05
Imp., bots. oz. 4.50 - 5.00

Gaultheria oil (see Wintergreen oil).

Gelatin, edible, 75 AOAC test, bbls., c.l., dlvd lb. .55 - —
150 AOAC test, bbls., c.l., dlvd. lb. .54 - —
200 AOAC test, bbls., c.l., dlvd. lb. .70 - —
225 AOAC test, bbls., c.l., dlvd. lb. .74 - —
275 AOAC test, bbls., c.l., dlvd. lb. .82 - —

Gelsenium root, bls. lb. .30 - .35

Gentian root, bls. lb. .24 - —
Grd., bbls., bxs. lb. .30 - —
Powd., bbls., bxs. lb. .30 - —

Geraniol, extra, cns., dms. lb. 1.75 - 2.40
Soap grade, dms. lb. .90 - 1.75
Standard, cns., dms. lb. 1.65 - —
Synthetic, dms. lb 1.30 - —

Geranium oil, Algerian, cns lb.23.00 - —
Bourbon, cns. lb.28.00 - —

Geranium oil, Turkish (see Palmarosa oil).

Geranyl acetate, cns. lb. 1.90 - 2.70
Synthetic, dms. lb. 1.45 - —

Ginger oil, dist., bots. lb.11.50 -14.00

Ginger oleoresin, NF, from African root, bots lb. 4.25 - 5.00
NF, from Jamaican root, bots. lb. 7.75 - —

Ginger root, Cochin, bgs lb. .29 - —
Jamaican, No. 3, bgs lb. .28 - —
Nigerian, split, bgs. lb. .20 - —
Sierra Leone, bgs. lb. .35½- —

Glauber's salt (see Sodium sulfate).

Gluconic acid, tech., 50%, dms., c.l., t.l., f.o.b. works lb. .20 - —
dms., l.c.l., f.o.b. works lb. .21 - —
tanks, f.o.b. works lb. .17 - —

Glue, bone, extracted, dry bone, 86 jellygrams, bgs., c.l., dlvd. lb. .16 - —
131 jellygrams, bgs., c.l., same basis lb. .16½- —
164 jellygrams, bgs., c.l., same basis lb. .18½- —
191 jellygrams, bgs., c.l., same basis lb. .19½- —
222 jellygrams, bgs., c.l., same basis lb. .21 - —

Glue, bone, green, 40 jellygrams, bgs., c.l., same basis lb. .16 - —
86 jellygrams, bgs., c.l., same basis lb. .16 - —
115 jellygrams, bgs., c.l., same basis lb. .16½- —

Glue, bone, green, 135 jellygrams, bgs., c.l., same basis lb. .17½- —
164 jellygrams, bgs., c.l., same basis lb. .18½- —
180 jellygrams, bgs., c.l., same basis lb. .19½- —
200 jellygrams, bgs., c.l., same basis lb. .20½- —

Bone glue, l.c.l., prices 2c. higher.

Glue, hide, 70-94 jellygrams, bgs., c.l., dlvd lb. .18 - —
95-149, bgs., c.l., dlvd lb. .19 - —
122-149, bgs., c.l., dlvd lb. .20½- —
150-177, bgs., c.l., dlvd lb. .22½- —
176-206, bgs., c.l., dlvd lb. .25 - —

Glue, hide, 207-236, bgs., c.l., dlvd lb. .28 - —
237-266, bgs., c.l., dlvd lb. .30½- —
267-298, bgs., c.l., dlvd lb. .32½- —
299-330, bgs., c.l., dlvd lb. .34½- —
331-362, bgs., c.l., dlvd lb. .36½- —
363-394, bgs., c.l., dlvd lb. .38 - —
395-427, bgs., c.l., dlvd lb. .40 - —
428-460, bgs., c.l., dlvd lb. .42 - —
461-494, bgs., c.l., dlvd lb. .44 - —
495-529, bgs., c.l., dlvd lb. .46 - —

Hide glue, l.c.l., prices 2c. higher.

l-Glutamic acid, 99½%, fib. dms., 100-lb. lots, frt. alld lb. 1.80 - —
fib. dms., 25-lb. lots, frt. alld. lb. 1.88 - —

l-Glutamine, bots., 1-9 kilo lots. kilo.150.00 -300.00
Bots., 50-kilo lots kilo.100.00 - —
Bots., 500-kilo lots kilo. 75.00 - —

Glycerine, dom., nat., crude, saponification, 88%, tanks, dlvd lb. .20½- —
nat., crude, soaplye, 80%, tanks, dlvd lb. .18½- —
nat., refd., USP, CP, 99%, dms., c.l., dlvd lb. .30½- —
dms., l.c.l., dlvd. lb. .31½- —
tanks, dlvd. lb. .29½- —

Glycerine, dom., nat., refd., USP, CP, 96%, dms., c.l., dlvd lb. .30 - —
dms., l.c.l., dlvd. lb. .30¾- —
tanks, dlvd. lb. .28¼- —
nat., high gravity, dms., c.l., dlvd lb. .30¾- —
dms., l.c.l., dlvd. lb. .31½- —
tanks, dlvd. lb. .29 - —

Glycerine, dom., syn., dms., c.l., dlvd lb. .31 - —
dms., l.c.l., dlvd. lb. .31¾- —
tanks, dlvd. lb. .29¼- —

Imp., nat., crude, soaplye, 80%, c.i.f lb. .17½- —

Glycine (see Aminoacetic acid).

Glycerol (see Glycerine).

Glycolic acid (see Hydroxyacetic acid).

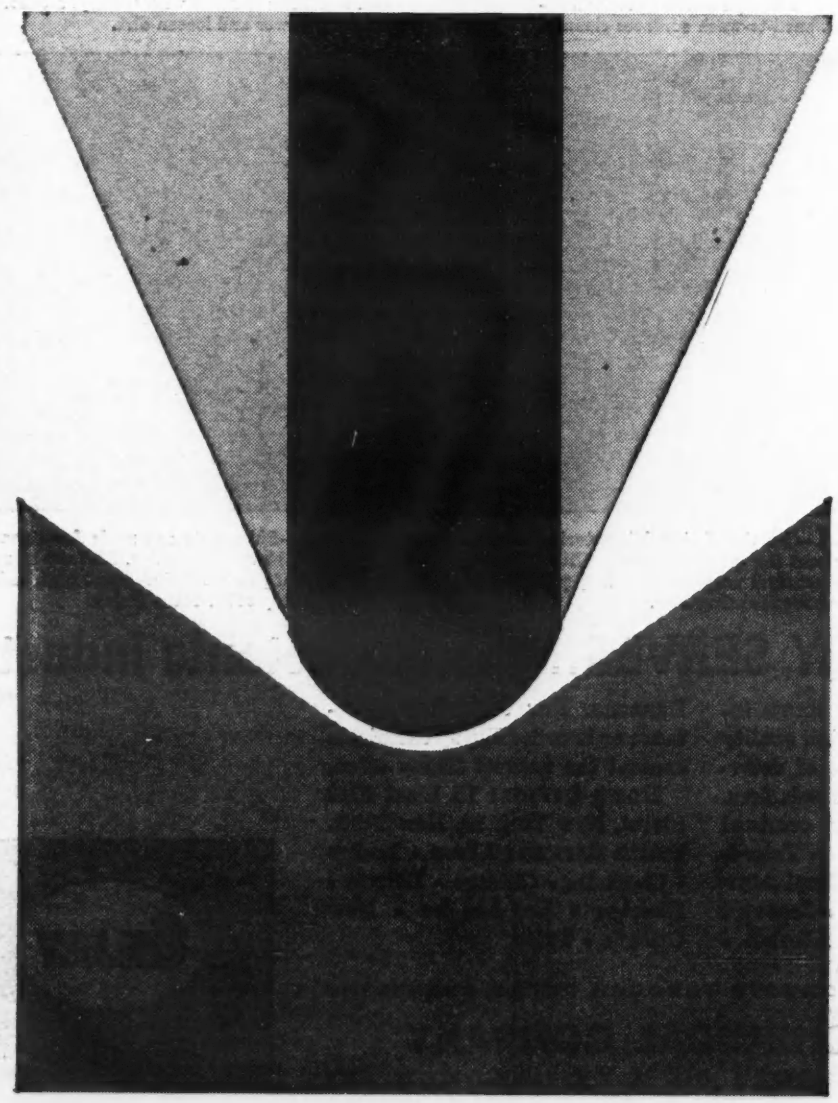
Glycolonitrile, 70%, aqueous, dms., c.l., t.l., works lb. .40 - —
dms., l.c.l., same basis lb. .42 - —
tanks, same basis lb. .39 - —

Glyoxal, 30%, dms., c.l., works lb. .20½- —
dms., l.c.l., works lb. .21¼- —
tanks, works lb. .18 - —

Golden seal root, NF, tested, bls. lb. 3.10 - —

Gramicidin, 1 to 5 kilos, f.o.b. works, gram. 4.70 - —

Grapefruit oil, dms. lb. 4.50 - —

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## Graphite—Iron Oxide

Graphite, amorp., powd., bgs., fib. dms., ex whse lb. .06 - .09½
Cryst., 88-90%, powd., bgs., fib. dms., ex whse lb. .19 - .21½
90-92%, powd., bgs., fib. dms., ex whse lb. .21 - .24½
95-97%, powd., bgs., fib. dms., ex whse lb. .29 - .31½
Flake, No. 1, 90-95%, bgs., fib. dms., ex whse lb. .29 .31
No. 2, 90-95%, bgs., fib. dms., ex whse lb. .29 - .31
Grease, white, choice all hog, tanks, dlvd lb. .07 - .07⅛
Yellow, tanks, dlvd. lb. .04⅛- —
Grease oil, No. 1, dms., c.l. lb. .13¾- —
dms., l.c.l. lb. .14¾- .15¾
Extra winter, strained, dms., c.l. lb. .16¼- —
dms., l.c.l. lb. .17¼- .18¼
Prime, burning, dms., c.l. lb. .17¾- —
dms., l.c.l. lb. .18¾- .19¾

**GREEN PIGMENTS**
**Green pigment quotations are listed individually. For example, prices on Green, chrome, may be found in the C's under Chrome green.**

Grindelia robusta herb, bls. lb. .40 - —
Guaiacol, NF, cryst., dms., tins lb. 2.10 - 2.15
NF liq., cbys., dms. lb. 2.30 - 2.40
Guaiacol carbonate, NF VII, dms lb. 3.40 - 3.45
Guaiacwood oil, cns. lb. .65 - .80
Guar gum, food grade, bgs., c.l. lb. .38 - —
bgs., 5,000 lbs or more lb. .39 - —
Indust., bgs., c.l. lb. .32 - —
Tech grade, bgs. lb. .30 - .33

**GUMS**
**Gum quotations are listed individually. For example, prices on Gum, Dammar, may be found in the D's under Dammar gum.**

## H

H acid, dry, bbls., c.l., frt. alld., 100% basis lb. .90 - —
bbls., l.c.l., same basis lb. .95 - —
Hansa yellow, 10 G, bbls., dlvd. E. of Rockies lb. 2.45 - —
Hansa G yellow, pigment, bbls. lb. 2.20 - —
Hawthorn berries, bgs. lb. .18 - .20
Heliotropin, 100-lb. lots, dms. lb. 2.60 - 3.40
Hellebore root, dom., green, bls lb. .70 - .75
Helonias root, bls. lb. 1.50 - —
Hemlock oil, cns. lb. 2.55 - 3.00
Henbane leaves, bls lb. .40 - .45
Heptachlor, dms., c.l., t.l., frt. alld., 100% basis lb. .96 - —
Heptane, indust., tankcars, New Jersey and New York gal. .20 - —
Houston, Texas gal. .1625- —
Hesperidin, purif., 100-lb. fib. dms., f.o.b., works lb. 8.95 - —
Hesperidin methylchalcone, bots., 50-lb. lots, works lb. 22.50 - —
bots., 5-lb. lots, works lb. 23.00 - —
bots., 1-lb. lots, works lb. 23.50 - —
Hexachlorophene, dms., 1,100 lbs. or more lb. 1.84 - —
dms., to 1,100 lbs. lb. 1.94 - —
Hexalin (see Cyclohexanol).
Hexamethylenetetramine, tech., bgs., 20,000-lb. lots or more, Perth Amboy or New York City lb. .233 - —
Hexamethylenetetramine, tech., bgs., 1,000-19,999-lb. lots, same basis lb. .243 - —
bgs., smaller lots, same basis lb. .253 - —
fib. dms., 1,000-lb. lots or more, same basis lb. .250 - —
fib. dms., smaller lots, same basis lb. .253 - —
Hexamethylenetetramine, USP, bgs., 500 lbs. or more, f.o.b. Fords, N. J., dlvd. New York City and Philadelphia lb. .42½- —
bgs., smaller lots, same basis lb. .43½- .46½
Hexane, industrial, tankcars, New Jersey and New York gal. .20 - —
Houston, Texas gal. .16 - —
1-Hexanol, dms., c.l., works lb. .35 - —
dms., l.c.l., works lb. .35¾- —
tanks, works lb. .33 - —
Hexyl cinnamic aldehyde, dms lb. 4.00 - 7.50
n-Hexyl methacrylate, dms., c.l., works lb. .75½- —
dms., l.c.l., works lb. .76 - —
Hexyl salicylate, dms. lb. 1.75 - —
Hexylene glycol, dms., c.l., dlvd lb. .17½- —
dms., l.c.l., dlvd. lb. .19 - —
tanks, dlvd. lb. .15 - —
Hexylresorcinol, USP, dms., 25-lb. lots or more, dlvd lb. 14.00 - —
dms., smaller lots, dlvd. lb. 14.50 - —
Homatropine hydrobromide, USP, bots oz. 3.25 - —
Homatropine methylbromide, USP, bots oz. 3.25 - —
Hoofmeal, 17-18% ammonia, bulk, c.l., Chicago unit-ton. 6.75 - —
Horehound herb, bls. lb. .18 - .30
Hydrastis (see Goldenseal).
Hydrazine hydrate, 85% ret. dms., works lb. 1.35 - 1.55
100%, ret. dms., works lb. 1.60 - 1.90
Hydriodic acid, purif., 47%, 2-cbys., f.o.b. works lb. 2.92 - —
Hydroabietyl alcohol, tech., solid, dms., c.l., dlvd. zone 1 lb. .29¼- —
dms., l.c.l., dlvd. zone 1 lb. .29¾- .30¼
tanks, dlvd. zone 1 lb. .27¼- —

Zone 1 for hydroabietyl alcohol comprises all of continental US except Ariz., Calif., Colo., Idaho, Mont., Nev., N. M., Ore., Utah, Wash., Wyo., and the western part of Texas.

Hydrobromic acid, medicinal, 48%, cbys., frt. equald lb. .48 - .56
Hydrochloric acid, anhyd. (see Hydrogen chloride).
Hydrochloric acid, 18°, cbys., c.l., works 100 lbs. 2.50 - —
cbys., l.c.l., dlvd. Metropolitan area 100 lbs. 2.90 - 3.05
tanks, works, frt. equald ton 28.00 - —
20°, cbys., c.l., works 100 lbs. 2.75 - —
cbys., l.c.l., dlvd. Metropolitan area 100 lbs. 3.15 - —
tanks, works, frt. equald ton 30.00 - —
Hydrochloric acid, 22°, cbys., c.l., works 100 lbs. 3.25 - —
cbys., l.c.l., dlvd. Metropolitan area 100 lbs. 3.65 - —
tanks, works, frt. equald ton 35.00 - —
Hydrochloric acid, CP, USP, consumers, cbys., extra, c.l., works lb. .15¾- —
cbys., l.c.l., same basis lb. .17¼- .17¾
Hydrochloric acid, 5-pint bots., extra cs., c.l., same basis. lb. .20¾- —
Hydrocortisone acetate, bulk, bots., kilo lots or more gram. 1.10 - 1.90
Hydrocortisone alcohol, bulk, bots., kilo lots or more gram. 1.15 - 1.90
Hydrocyanic acid, dilute, NF, 2%, 5-pt. bots., f.o.b. works pt. .70 - —
Hydrofluoric acid, anhyd. (see Hydrogen fluoride).
Hydrofluoric acid, aqueous, 70%, 55-gal. or 30-gal. dms., c.l., t.l., dlvd. 100 lbs. 19.25 - —
55-gal. dms., l.c.l., l.t.l., dlvd. 100 lbs. 20.75 - —
20-gal. dms., c.l., t.l., dlvd. 100 lbs. 21.00 - —
20-gal. dms., l.c.l., l.t.l., dlvd. 100 lbs. 22.50 - —
tanks, works frt. equald. 100 lbs. 13.40 - —

Delivered prices apply to all states east of Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Washington and Wyoming. In those states add $2.70 per cwt. for drum delivery.

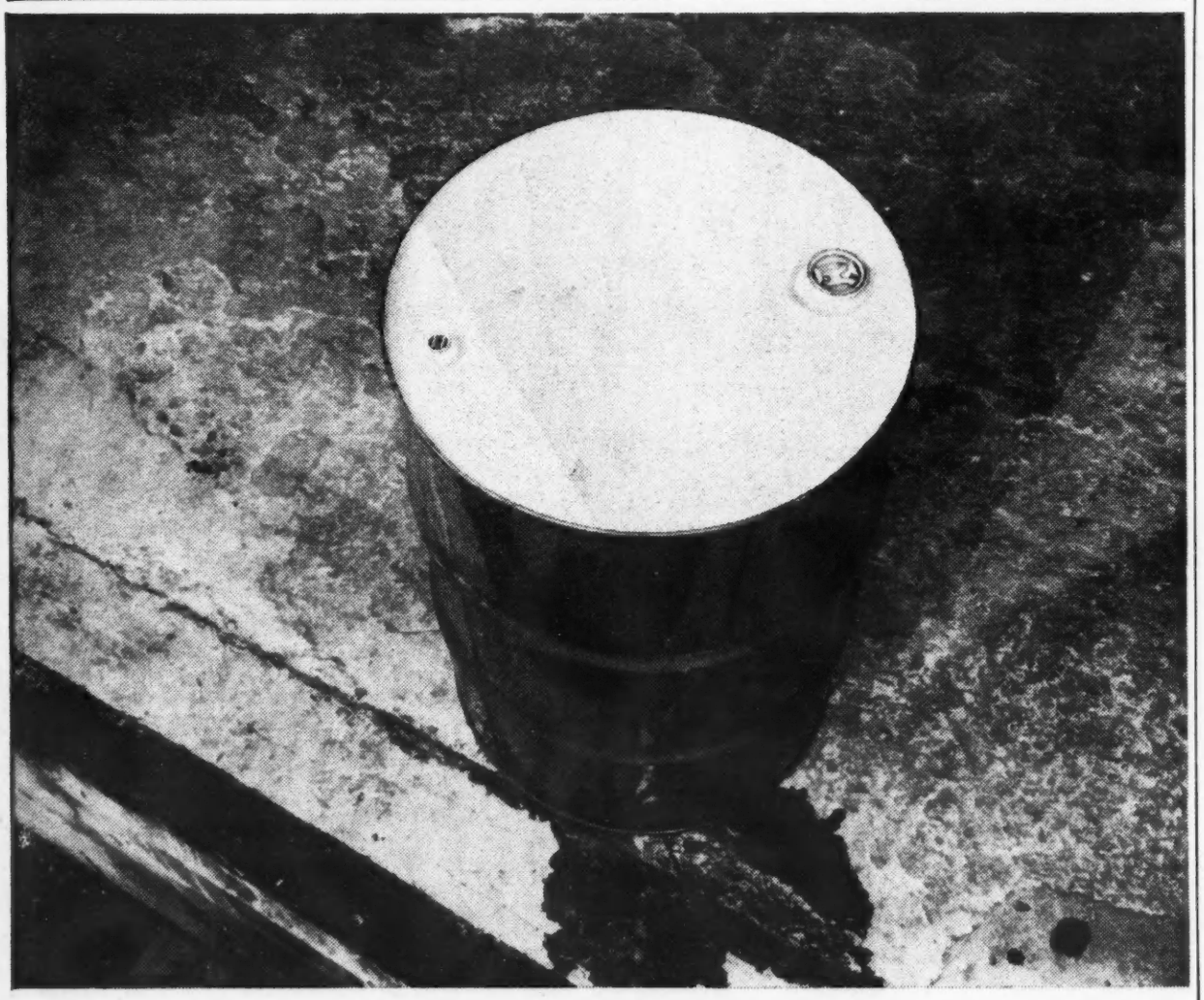
Hydrofluosilicic acid, dms., works, 30% basis lb. .06 - —
Hydrofuramide, dms., fib. ctns., works lb. .30 - .40
50-lb. cyls., l.c.l., works lb. .55 - .60
Hydrogen chloride, anhyd., 50-lb. cyls., l.c.l., works lb. .45 - —
Hydrogen cyanide, liq., 98%, tanks, works lb. .14 - —
Hydrogen fluoride, anhyd., cyls., dlvd. E lb. .30½- .32½
cyls., dlvd W. lb. .39 - —
tanks, works lb. .18 - —
Hydrogen peroxide, 35%, dms., c.l., dlvd. lb. .202 - —
dms., l.c.l., dlvd. lb. .211 - —
tanks, dlvd. lb. .1800- —
Hydroquinone, photo grade, dms., 50-lbs., f.o.b. works lb. 1.10 - —
Tech., dms., c.l., dlvd. lb. .82½- —
dms., l.c.l., dlvd lb. .84½- —
Hydroquinone monomethyl ether, dms., t.l., dlvd lb. 2.59 - —
dms., l.t.l., dlvd. lb. 2.61 - —
Hydroxyacetic acid, tech., 70% dms., Philadelphia and Chicago lb. .11 - —
tanks, Belle, W. Va. lb. .073 - —
Hydroxycitronellol, cns. lb. 4.85 - 5.75
Hydroxyethyl cellulose, add grades, fib. dms., 20,000-lb. lots or more, f.o.b. shipping point lb. .84 - —
fib. dms., 2,000 to 19,999-lb. lots, same basis lb. .89 - —
fib. dms., 100 to 1,999-lb. lots, same basis lb. .93 - —
fib dms., smaller lots, same basis lb. 1.03 - —
Hyoscine salts (see Scopolamine).
Hyoscyamine hydrobromide, bots. oz. 7.00 - —
Hyoscyamine sulfate, bots. oz. 7.00 - —
Hypophosphorous acid, purif., 50%, 10-cbys., f.o.b. works lb. 1.95 - —
NF, 50%, 10-cbys., same basis lb. 1.35 - —

## I

Ichthammol, NF, dms. lb. .75 - 1.05
Indigo (see Dyes, coaltar, 1171 indigo, syn.)
Indole, CP, bots. lb. 13.75 - 15.00
Inositol, 50-100 lb. dms., 1,000 lbs. or more, dlvd. lb. 4.50 - —
Inositol, 50-lb. lbs., less than 1,000 lb., dlvd lb. 4.75 - —
10 lb. cns., 10-50 lbs., dlvd. lb. 5.00 - —
5 lb. bots., dlvd. lb. 5.25 - —
Insect flowers (see Pyrethrum).
Iodine, crude, kgs. lb. .95 - 1.10
Resub., USP, dms., f.o.b. works lb. 2.00 - 2.02
Iodochlorohydroquinolin, USP, dms. lb. 3.60 - —
Iodoform, NF, dms., 300-lbs., f.o.b. works lb. 4.90 - —
dms., 100-lbs., same basis lb. 5.05 - —
a-Ionone, cns. lb. 4.60 - 5.75
b-Ionone, cns. lb. 4.15 - 6.15
Ipecac root, whole, bgs. lb. 8.00 - 8.50
Powd., bbls., bxs. lb. 9.50 - 10.00
Irish moss, bleached, prime, bls lb. .25 - .27
Iron blue, alkali-resisting, bbls., c.l., dlvd. E lb. .57 - —
bbls., l.c.l., ton lots, same basis. lb. .58 - —
bbls., smaller lots, same basis lb. .59 - —
Dom., reg., bbls., c.l., dlvd. E lb. .52 - —
Iron blue, alkali-resisting, dom., reg., bbls., l.c.l., ton lots, same basis lb. .53 - —
bbls., l.c.l., smaller lots, same basis lb. .54 - —
Imp., British, reg., bbls., c.l., dlvd. E lb. .48 - —
bbls., l.c.l., ton lots, same basis lb. .49 - —
bbls., l.c.l., smaller lots, same basis lb. .50 - —

Iron blue dlvd. prices 1c. higher for Pacific Coast states: Wash., Ore., Cal., N. M., Ariz., Mont., Wyo., Utah, Col. and Nev.

Iron compounds (see Ferric or Ferrous).
Iron oxide, black, pure, bgs., c.l., works lb. .14¾- —
bgs., l.c.l., works lb. .15 - —

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Iron oxide, brown, pure, bgs., c.l., works lb. .14¼- —
bgs., l.c.l., works lb. .14½- —
Iron oxide, metallic, brown, bgs., works lb. .05¼- —
Iron oxide, Persian Gulf, red., bgs., c.l., works lb. .08¾- —
Iron oxide, red, dom., pure, bgs., Bethlehem, E. St. Louis, New York City lb. .14¼- —
Iron oxide, red, nat., 75-85% ferric oxide, bgs., c.l., works lb. .06¼- —
bgs., l.c.l., works lb. .06½- —
Iron oxide, Spanish red, bbls., c.l., ex dock lb. .05¾ Nom.
bbls., l.c.l., ex dock lb. .06 Nom.
bbls., l.c.l., ex whse, New York. lb. .06½ Nom.
Iron oxide, yellow, nat., French type, bgs., c.l., works lb. .06¼- —
Peruvian type, bgs., l.c.l. lb. .023 - .024
Iron oxide, yellow, pure, light lemon shade, bgs., c.l., works lb. .12¼- —
Other shades, same basis lb. .12 - —
Isoamyl alcohol, dms., c.l., works, frt. alld E lb. .27½- —
dms., l.c.l., same basis lb. .29 - —
tanks, same basis lb. .23 - —
Isoborneol, cns. lb. 1.44 - 1.80
Isobornyl acetate, cns. lb. .46 - .56
Isobornyl formate, dms. lb. 1.20 - —
Isobornyl proprionate, dms. lb. 1.25 - 1.35
Isobutyl acetate, perfume grade, cns lb. .35 - —
Isobutyl acetate, solvent grade, dms., c.l., dlvd. E. of Rockies lb. .15¼- —
dms., l.c.l., same basis lb. .16¾- —
tanks, same basis lb. .12¾- —
Isobutyl alcohol, dms., c.l., dlvd lb. .15½- —
dms., l.c.l., dlvd. lb. .17 - —
tanks, dlvd. lb. .13 - —
Isobutylene, 99%, tanks, works gal. .38 - —
Isobutyl isobutyrate, dms., f.o.b. works lb. .75 - —
Isobutyraldehyde, CP, dms., c.l., dlvd lb. .27½- —
dms., l.c.l., dlvd. lb. .28½- —
Tech., dms., c.l., dlvd. lb. .22 - —
dms., l.c.l., dlvd. lb. .23 - —
tanks, dlvd. lb. .19½- —
Isobutyronitrile, dms., c.l., dlvd lb. .52 - —
dms., l.c.l., same basis lb. .57 - —
Isobutyric acid, dms., c.l., t.l., dlvd. lb. .35 - —
dms., l.c.l., t.l., same basis lb. .36½- —
t.c. t.l., same basis lb. .33 - —
Isoeugenol, cns. lb. 3.40 - 4.25
Isoniazid, powd., bulk, kilo or more kilo. 18.00 - —
Isonicotinic acid, 100-lb. fib. dms., works lb. 4.25 - —
Isonicotinic acid hydrazide (see Isoniazid).
Iso-octyl alcohol, dms., c.l., dlvd. E. lb. .23½- —
dms., l.c.l., dlvd. E. lb. .25 - —
tanks, dlvd. E. lb. .21 - —
Isopentane, com'l. grade, tanks, f.o.b. Tex. refy gal. .16½- —
Isophorone, dms., c.l., works lb. .24½- —
dms., l.c.l., works lb. .25¼- —
tanks, works lb. .22½- —
Isophthalic acid, dms., c.l., works, frt. equald lb. .18 - —
dms., l.c.l., same basis lb. .19 - —
Isopropanol (see Isopropyl alcohol).
Isopropyl acetate, dms., c.l., dlvd. lb. .14 - —
dms., l.c.l., same basis lb. .15½- —
tanks, same basis lb. .11½- —
Isopropyl alcohol, refd., 91%, dms., c.l., dlvd gal. .58 - —
dms., l.c.l., dlvd. gal. .68 - —
tanks, dlvd. gal. .42 - —
Isopropyl alcohol, refd., 95%, c.l., dms., dlvd gal. .60 - —
dms., l.c.l., dlvd. gal. .70 - —
tanks, dlvd. gal. .44 - —
anhyd., c.l., dlvd. gal. .62 - —
dms., l.c.l., dlvd. gal. .72 - —
tanks, dlvd. gal. .46 - —
Isopropyl benzene (see Cumene).
Isopropyl ether, dms., c.l., dlvd lb. .09½- —
dms., l.c.l., dlvd. lb. .11 - —
tanks, dlvd. lb. .07 - —
Isopropyl-N-(3-chlorophenyl) carbamate (CIPC) tech., dms., c.l., t.l., works lb. 1.00 - —
dms., l.c.l., works lb. 1.05 - 1.25
tanks, works lb. .99 - —
Isopropylamine (see Mono, Di, or Tri-).
Isopropyl-N-phenyl carbamate, 450-lb. fib. dms., c.l., t.l., works lb. .75 - —
450-lb. fib. dms., l.c.l., works lb. .80 - .90
Isoquinoline, dms., works lb. .65 - 1.25
Itaconic acid, refd., bgs., c.l., f.o.b. works lb. .53½- —
bgs., l.c.l., same basis lb. .54½- —
Tech., bgs., c.l., same basis lb. .38½- —
bgs., l.c.l., same basis lb. .39½- —

## J

J acid, paste, bbls., works, 100% basis lb. 2.70 - —
Powd., bbls., same basis lb. 2.75 - —
Jalap root, NF, bls. lb. .60 - —
NF, powd., bbls., bxs. lb. .70 - .75
Japan wax, cs. lb. .29 - .31
Juniper berries, bgs. lb. .16 - .17
Juniper berry oil, NF, bots. lb. 2.90 - 3.75
Twice rectified, bots. lb. 3.25 - —
Juniper tar oil, NF, dms. lb. .42 - .60
Juniper wood oil, tech., cns. lb. .38 - .55

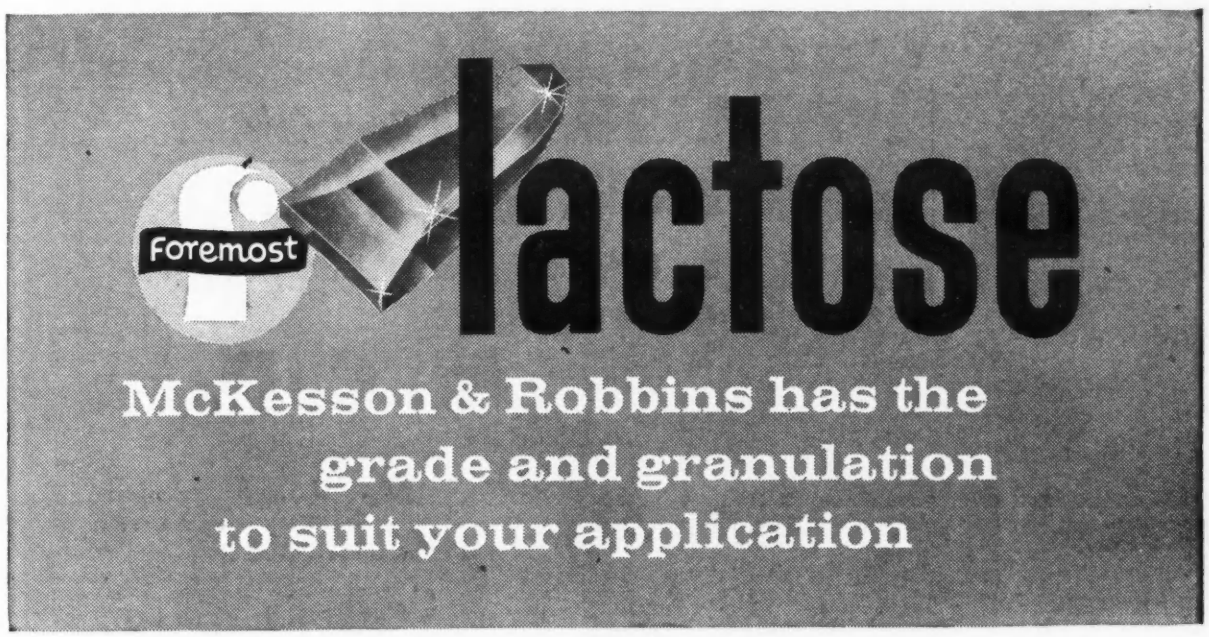
## K

Kaolin (see also Clay, China).
Kaolin, NF, powd., fib. dms lb. .10 - .12
NF, colloidal, 50-lb. bgs. lb. .15½- .17½
Karaya gum, No. 1, NF, powd., bls lb. .48 - .50
No. 2, powd., bbls. lb. .43 - .45
No. 3, powd., bbls. lb. .37 - .40
Koch acid, bbls., frt. alld., 100% basis lb. 1.00 - —
Kola nuts, bgs. lb. .13 - .15

## L

L acid, bbls., works lb. 1.25 - —
Lacquer diluent, petroleum, 140°F. 200°F, b.r., tankcars, New Jersey and New York gal. .20 - —
Group 3 gal. .15125- —
Houston, Texas gal. .16 - —
Lacquer diluent, petroleum, 200°F-240°F b.r., tankcars, New Jersey or New York gal. .20 - —
Group 3 gal. .14125- —
Houston, Texas gal. .16 - —
Lactic acid, edible, 50%, bbls. dms., c.l., frt. equald lb. .1965- —
bbls., dms., 20 or more, frt. equald lb. .2035- —
bbls., dms., 5 to 19, frt. equald. lb. .2085- —
bbls., dms., 1 to 4, frt. equald. lb. .2135- —

Lactic acid, edible, 80%, bbls., c.l., dms., frt. equald lb. .3335- —
bbls., dms., 20 or more, frt. equald lb. .3385- —
Lactic acid, edible, 80%, bbls., dms., 5 to 19, frt. equald lb. .3435- —
bbls., dms., 1 to 4, frt. equald. lb. .3485- —
Plastic grade, 50%, c.l., bbls., works lb. .2740- —
bbls., 20 or more, works lb. .2790- —
bbls., 5 to 19, works lb. .2840- —
bbls., 1 to 4, works lb. .2890- —
80%, bbls., c.l., works lb. .4625- —
bbls., 5 to 19, works lb. .4725- —
bbls., 1 to 4, works lb. .4775- —
Tech., 44%, bbls., c.l., works. 100 lbs. 12.45 - —
bbls., l.c.l., works 100 lbs. 12.85 - —
USP, 85%, cbys. lb. .85 - —
Lactose, crystalline, edible, bgs., 23,000-lb. lots, frt. equald lb. .14 - —
bgs., 6,000-lb. lots, frt. equald lb. .14½- —
bgs., 2,000-lb. lots, frt. equald lb. .14¾- —
bgs., 200-lb. lots, frt. equald. lb. .15¼- —
Edible lactose in fib. dms., ½c. higher.
Lactose, ferment, grade, bgs., c.l., works lb. .08½- —
Lactose, USP, reg., fib. dms., 30,000-lb. lots, frt. equald lb. .21½- —
fib. dms., 2,000-lb. lots, frt. equald lb. .22¼- —
200-1,880-lb. lots, frt. equald lb. .22¾- —
USP lactose in bags ½c. to 1c. lower.
Lactose, USP, spray dried, bgs., t.l., frt. equald lb. .18½- —
bgs., l.t.l., frt. equald lb. .19 - .19¾
Lady's slipper root, bls lb. 3.00 - 3.50
Lamp black, bgs., c.l., works lb. .16 - .45
Lanolin, USP, anhyd., 400-lb. dms., works lb. .24 - .26
USP, annyd., cosmetic, 400-lb. dms., works lb. .26 - .30
USP, hydrous, 400-lb. dms., works. lb. .20 - —
Lard, cash, dms., Chicago lb. .1030- —
Lard oil (see Grease oil).
Larkspur seed, bgs. lb. .55 - —
Laurel leaf oil, dms., cns. lb. 9.75 - 12.50
Laurent's acid, bbls lb. .70 - —
Lauric acid, pure, dms. lb. .33¾- .36¼
tanks lb. .32¾- —
Lauryl alcohol, bots lb. 2.00 - 2.50
n-Lauryl methacrylate, dms., c.l., t.l., works lb. .65½- —
dms., l.t.l., works lb. .66 - —
Lavandin oil, 22-24%, dms. lb. 1.10 - 1.50
Abrial, dms. lb. 1.00 - 1.50
Lavender flowers, medium, bls lb. .55 - .60
Ord., bls. lb. .20 - .25
Select., bls. lb. .90 - 1.00
Lavender flower oil, USP, French, 35-37% ester, cns lb. 1.85 - 4.00
40-42% ester, cns. lb. 5.00 - 7.75
Spike, Spanish, cns. lb. 2.20 - 3.00
Lead acetate, NF, cryst., gran., powd., bbls lb. .34½- —
White, cryst., bbls. lb. .25½- —
gran., bbls. lb. .26½- —
powd., bbls. lb. .26½- —
Lead arsenate, acid powder, dealers, 3-50-lb. bgs. or any quantity, frt. alld. on $150 or more lb. .30½- —
1-lb. bgs., same basis lb. .47 - —
Lead, blue, basic sulfate, bbls., c.l., shipt. point, frt. alld lb. .17 - —
bbls., l.c.l., same basis lb. .18 - —
Lead carbonate (see Lead, white, basic carbonate).
Lead chloride, dms. lb. .52 - —
Lead iodide, NF, V jars lb. 3.82 - —
Lead linoleate fused, 26% Pb, dms. lb. .38 - —
Lead metal prime, pigs, New York. lb. .12 - —
St. Louis lb. .1180- —
Lead monosilicate, bgs., c.l., works, frt. equald lb. .1385- —
bgs., l.c.l., same basis lb. .1485- —
Lead naphthenate, liq., 16% Pb., dms., dlvd lb. .19½- —
24% Pb., dms., dlvd. lb. .24¼- —
Solid, 37% Pb., dms., dlvd. lb. .31¾- —
Lead nitrate, bbls. lb. .24¼- .25¾
Lead orthosilicate gel., 50-60% PbO, dms., works lb. .29¾- .34¼
Lead peroxide, tech. powd., bbls lb. .45 - .50
Lead phthalate, dibasic, dms., works. lb. .41 - —
Lead, red, 95% $Pb_3O_4$ or less, bbls., c.l., works, frt. equald. lb. .1475- —
bbls., l.c.l., same basis lb. .1575- —
Lead, red, 97% $Pb_3O_4$, bbls., c.l., same basis lb. .1495- —
bbls., l.c.l., same basis lb. .1595- —
98% $Pb_3O_4$, bbls., c.l., same basis lb. .1510- —
bbls., l.c.l., same basis lb. .1610- —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DIVISION OF FOREMOST DAIRIES, INC.

Lead, resinate, precip. 23% Pb. dms., ton lots, dlvd lb. .43¾- —
Lead salicylate, normal dms. works lb. .46 - —
Lead silicate (see Lead white basic silicate).
Lead silicochromate, bgs., c.l., f.o.b. mfrs. point, frt. alld lb. .20 - —
bgs., l.c.l., same basis lb. .21 - —
Lead sulfate (see Lead blue basic sulfate).
Lead tallate liq., 16% Pb, dms lb. .17¼- —
24% Pb, dms lb. .26¾- —
Solid, 30% Pb, dms lb. .23¼- —
Lead white, basic carbonate, bgs., c.l., shipt pt., frt. alld lb. .18 - —
bgs., l.c.l., same basis lb. .19 - —
basic silicate bgs., c.l., shipt. pt., frt. alld lb. .16½- —
bgs., l.c.l., same basis lb. .17½- —
basic silicate bgs., c.l., shipt. pt., frt. alld lb. .17 - —
bgs., l.c.l. same basis lb. .18 - —
Lecithin, edible, tech., bleached, non-ret. dms., c.l., works. lb. .14 - .15
non-ret. dms., l.c.l., same basis lb. .15 - .16
Lecithin, edible, tech., unbleached, non-ret. dms., c.l., same basis lb. .13 - .14
non-ret. dms., l.c.l., same basis lb. .14 - .15
Lemon bioflavonoid complex, 100-lb. package, works lb 6.45 - —
Lemon oil, USP, Calif., cns., dms. lb. 1.25 - 1.50
Messina, cns lb 3.25 4.00
Lemongrass oil, cns., dms. lb. 1.95 - 2.20
dl-Leucine, dms., works lb.12.25 -15.00
Licorice root, gran., bls. lb. .13 - —
Powd., bls. lb. .15 - .16
Whole, bls. lb. .09 - .10
Lignaloe wood oil, Mexican, cns lb. 2.75 - 3.50
Lignosulfonate (see under Ammonium or Sodium lignin sulfonate).
Lilac oil lb. 1,500.00
Lime, chemical (quicklime), bulk, c.l., 50,000 lbs., works, E. ton.14.25 - —
Chemical, hydrated, bgs., c.l., same basis ton.17.25 - —
spray, bgs., c.l., same basis ton.18.25 - —
For New York delivery, add $6.29 freight charge
Lime oil, dist., Mexican, cns lb. 5.75 - —
West Indian, cns lb. 5.75 - —
Expressed, West Indian, cns lb. 7.75 - 8.75
Lime salts (see Calcium).
Lime-ammonium nitrogen, 20.5% N (see Ammonium nitrate with dolomite).
Linalool, ex bois de rose oil, dms. lb. 2.45 - 4.25
Syn., 98-100%, dms., works lb. 2.40 - 2.75
Linalyl acetate, ex bois de rose, 90-92%, dms lb. 2.65 - 4.50
96-98%, dms lb. 3.25 - —
Syn., 98-100%, dms., works lb. 2.75 - —
Lindane, 25% formulation, to distributors, dms., frt. alld. lb. 1.35 - 1.50
Lindane, tech., to formulators, 250-lb. dms., 5,000 lbs., dlvd. lb. 2.13 - —
100-lb. dms., 5,000-lbs., dlvd lb. 2.15 - —
250-lb. dms., less than 5,000-lbs., dlvd lb. 2.18 - —
100-lb. dms., less than 5,000-lbs., dlvd lb. 2.20 - —
Linden flowers, with leaves, bls lb. .35 - .40
Without leaves, bls. lb. .42 - .45
Linseed meal, expeller, 32% bulk, Minneapolis, Mills ton.58.50 - —
Extracted, 34% bulk, same basis ton.52.00 - —
Linseed oil, raw, dms., c.l., New York lb. .1630- —
dms., l.c.l., New York lb. .1720- .1770
tanks, f.o.b. Minneapolis lb. .1270- —
tanks, New York lb. .1381- —
tankwagon, New York lb. .1431- —
Boiled linseed oil, .006c. per lb. higher.
Linseed oil, acid, dist., dms lb. .1980- —
Water-white, dms. lb. .2280- —
Litharge, coml., powd., bbls., c.l., works, frt. equald lb. .1425- —
bbls., l.c.l., same basis lb. .1525- —
Lithium aluminum hydride, lump, dms., works lb.33.00 -39.00
Lithium benzoate, dms. lb. 1.65 - 1.67
Lithium bromide, NF, gran., bgs., works, frt. equald lb. 2.60 - —
Lithium carbonate, NF, dms., c.l., t.l., dlvd lb. 1.29½- —
dms., ton lots to t.l., dlvd lb. 1.30 - 1.30½
Tech., dms., c.l., frt. alld lb. .67 - —
dms., t.l., same basis lb. .73 - —
dms., ton lots, same basis lb. .76 - —
dms., smaller lots, f.o.b. plant. lb. .81 - —
Lithium chloride, CP, anhyd., dms., ton lots lb. 1.23½- —
Tech., anhyd., dms., c.l., t.l., dlvd. or works, frt. alld. lb. .87 - —
dms., l.c.l., same basis lb. .88 - .92
Lithium citrate, NF, dms., ton lots. lb. 1.50 - —
Lithium fluoride, dms., 20,000-lb. lots, dlvd lb. 2.15 - —
bbls., ton lots and more, dlvd lb. 2.18½- —
bbls., less ton lots, dlvd. lb. 2.23½- —
Lithium hydride, powd., dms., 500-lbs. lots or more, works. lb. 9.50 - —
Lithium hydroxide, monohydrate, dms., c.l., t.l., frt. alld lb. .72 - —
dms., l.c.l., frt. alld. lb. .73 - —
Lithium manganite, dms., works lb. .95 - 1.05
Lithium nitrate, tech., dms., 100-lb. lots lb. 1.15 - 1.25
Lithium salicylate, dms. lb. 1.60 - 1.70
Lithium silicate, dms., works lb. 1.10 - 1.20
Lithium stearate, dms., c.l., works. lb. .47½- —
dms., ton lots, works lb. .48½- —
dms., less-ton lots, works lb. .53½- —
Lithium sulfate, dms., 100-lb. lots. lb. 1.15 - 1.25
Lithium titanate, dms., works lb. 1.15 - 1.25
Lithol red toner, barium, bbls., works lb. .98 - —
Lithol-rubine red toner, pure, bbls., works lb. 1.50 - —
Resinated, bbls., works lb. 1.47 - —
Lithopone ord., bgs., c.l., dlvd E. lb. .08⅞- —
bgs., l.c.l., dlvd. E lb. .09⅛- —
Titanated (high-strength), bgs., c.l., dlvd lb. .11 - —
bgs., l.c.l., dlvd lb. .12 - —
Lobelia herb, bls. lb. .55 - —
Loheline sulfate, bots., 50-oz. lots. works oz.30.00 - —
Locust bean gum, powd., bgs. lb. .35 - .40
Lycopodium, cs. lb. 3.25 - 3.50
1-Lysine monohydrochloride, 25-lb. dms lb. 4.95 - —

## M

Mace, Siauw, No. 1, bls. lb. 1.70 - —
No. 2, whole, bls. lb. 1.40 - —
siftings, bls. lb. 1.35 - —
Mace oil, dist., cns., dms lb. 9.00 -11.00
Magnesia, calcined, tech., bgs., cns., frt equald lb. .25¾- .26⅛
Tech., syn., rubber grade, light, bgs., c.l., frt. equald lb .28¾- .30
rubber grade, extra light, bgs., c.l., frt. equald lb. .28 - —
bgs., l.c.l., frt. equald lb. .28¾- —

Above prices are quoted f.o.b. works, freight equald., with Metropolitan New York and competitive producing points

Magnesia, calcined, tech., heavy, 85%, bgs., c.l., f.o.b. Lunning, Nev ton.39.50 - —
91%, bgs., c.l., same basis. ton.49.50 - —
95%, bgs., c.l. same basis. ton 59.00 - —
USP, light, bgs. lb. .36½- .37½
USP, heavy, bgs. lb. .36½- .37¼
Magnesite, chemical grade, calcined, powd., bgs., c.l., works, frt. equald ton.86.25 - —
Chemical grade, deadburnt, standard grain, bulk., c.l., Chawelah, Wash. ton.46.00 - —
Magnesium bromide, cs., jars lb. .95 - 1.00
Magnesium carbonate, tech., bgs., c.l., frt. equald lb. .11 - —
bgs., t.l., frt. equald lb. .11½- —
bgs., l.c.l., frt. equald lb. .13½- .14
Magnesium carbonate, USP, bgs., c.l., frt. equald lb. .13½- —
bgs., t.l., frt. equald lb. .14 - —
bgs., l.c.l., frt. equald lb. .15 - 16

. Above prices are quoted f.o.b. works, freight equald., with Metropolitan New York and competitive producing points.

Magnesium chloride, anhyd., 92%, flake or pebble, drums., c.l., works lb. .12¾- —
dms., l.c.l., works lb. .14 - .15
Magnesium chloride, hydrous, 99%, flake, bgs., c.l., works ton.55.00 - —
bgs., l.c.l., works ton.65.00 -60.00
Magnesium gluconate, 100-lb. dm., f.o.b. works, E lb. 1.42 - —
Magnesium hydroxide, NF, powd., dms., 500-lbs. or more, f.o.b. works lb. .24½- .25⅛
Magnesium lauryl sulfate, dms., c.l., frt. alld lb. .22½- —
dms., l.t.l., frt alld. lb. .23½- —
tanks, frt. alld. lb. .21½- —
Magnesium metal, 99.8%, ingots, 10,000-lb. lots or more, works lb .36 - —
pigs, 10,000-lb. lots or more, works lb. .35¼- —
sticks, cs., works, frt. alld on carlots lb. .59 - —
Magnesium nitrate, cryst., dms., works lb. .29 - —
Magnesium oxide (see Magnesia, calcined).
Magnesium phosphate, tribasic, NF, bbls lb. .75 - —
Magnesium silicate (see Talc).
Magnesium silicofluoride, dms., works lb .10½- .12
Magnesium sulfate, tech., bgs., c.l., works 100 lbs. 2.15 - —
bgs, l.c.l., works 100 lbs. 2.90 - 3.15
USP, cryst., bgs., c.l., works, 100 lbs. 2.35 - —
bgs., l.c.l., 5,000 lbs., 1 withdrawal 100 lbs. 3.10 - —
bgs., smaller lots 100 lbs. 3.35 - —
Magnesium trisilicate, USP, fib. dms., 5,000-lb. lots lb. .38 - —
fib. dms., 1,000-lb. lots lb. .40 - —
fib. dms., 100-lb. lots lb. .45 - —

Bulky and super grades of magnesium trisicilate 7c. per lb. higher.

Malachite green, straight, PTA, bbls., works lb. 5.30 - —
Malathion, dms., c.l., works lb. .89 - —
dms., l.c.l., works lb. .92 - 1.01
Maleic acid, cryst., powd., dms lb. .37¼- —
Maleic anhydride, dms., c.l., frt. equald lb. .24 - —
dms., l.c.l., frt. equald lb. .25½- —
tanks, frt. equald lb. .22½- —

Maleic anhydride in bags ½c. per lb. less.

Malic acid, tech., dms lb. .50 - —
Mandelic acid, NF, dms., 1,000-lb. lots lb. 2.35 - —
dms., smaller lots lb. 2.40 - 2.50
Mandrake root, bls lb. .40 - —
Manganese acetate, dms., dlvd lb. .35 - —
Manganese borate, tech., fib. dms. lb. .23¼- —
Manganese carbonate, chemical grade, 46% Mn, bgs., 20,000-lb. lots and more, works lb. .11 - .16
Manganese chloride, CP, anhyd., dms., 20,000-lb. lots, works lb. .21¾- —
smaller lots, works lb. .23½- —
Manganese dioxide, African, 83-87%, 40,000 to 99,999-lb. lots, burlap paper lined bgs., gross for net works ton.148.00 - —
40,000 to 99,999-lb. lots, paper bgs., same basis ton.144.50 - —
40,000 to 99,999-lb. lots, dms. same basis ton.152.50 - —

Prices for manganese dioxide in 10,000 to 40,000-lb. lots, $3 per ton higher.


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**ONE PRICE** — *That Saves You Money*
. . . and Perfect Performance for *Every* Purpose!

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Pure
Unadulterated
California
**LEMON OIL**
**U. S. P.**

An *Exclusively First Grade Lemon Oil* . . . Cold Pressed in California . . . and *Packed by the Producer* to Assure Highest Quality

For nearly 30 years, Mutual Citrus Products Co. has been cold-pressing California lemon oil for distribution by others. Now, M.C.P. LEMON OIL is being *prepared and packed* under the M.C.P. label. There is only *one label* and *one* quality — *the highest* — for M.C.P. LEMON OIL. Yet, M.C.P. LEMON OIL costs you *less* . . . while providing a product that is unsurpassed for flavor, purity, and dependability . . . for *every* purpose.

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*Distributed by*

**MUTUAL CITRUS PRODUCTS CO.**
**424 South Atchison Street, Anaheim, Calif.**

**R. D. WEBB & CO., INC.**
**137 Boston Post Road, Cos Cob, Conn.**

Manganese gluconate, dms.....lb. 1.84 • —
Manganese hydrate, dms., dlvd..lb. .35 • —
Manganese hypophosphite, NF, dms. lb. 3.52 • —
Manganese linoleate, liq., 4.35% Mn, dms..lb. .35¾- —
Solid, precip., 8.2% Mn, bbls..lb. .41¼- —
Manganese metal, electrolytic, dms., c.l., dlvd. E. .....lb. .34 • —
dms., ton lots, dlvd. E. .....lb. .36 • —
dms., smaller lots, dlvd. E...lb. .38 • —
Manganese naphthenate, liq., 6% Mn, dms., frt. alld..lb. .29¾- —
Manganese resinate, fused, 3½% Mn, dms..lb. .29¼- —
Precip., 6½-7% Mn, dms.....lb. .37 • —
Manganese sulfate, fertilizer grade, 65% $MnSO_4$, bgs., c.l., dlvd., S. E..ton.86.50 • —
bgs., l.c.l., dlvd. S. E..ton.93.50 • —
Manganese tallate, 6%, dms.....lb. .26½- —
Manila copal gum, C, bgs. .....lb. .35 • .39
DBB, bgs. .....lb. .25 • .28
DK, bgs. .....lb. No stocks.
DK, dust, bgs. .....lb. .14 Nom.
MA, soft, bgs. .....lb. .20 • .34
WS, bgs. .....lb. No stocks.
Mannitol, com'l, fib. dms., ton lots, works..lb. .60 • —
fib. dms., to ton lots, works..lb. .62 • —
fib. dms., single dm., works..lb. .65 • —
Marine pitch, dms. .....lb. .04¼- .05
MBTS (see Mercaptobenzothiazyl disulfide).
MBT (see 2-Mercaptobenzothiazole).
Melamine, bgs., c.l., works.....lb. .26½- —
bgs., l.c.l., works .....lb. .28 • —
Menadione, USP, bots. .....gram. .044 • .05
Menhaden oil, crude, tanks, works, Atl. & Gulf..lb. .06 • —
Menthol, nat., USP, Brazilian, large crystals, cs..lb. 8.50 • —
Nat., USP, Brazilian, regular crystals, cs..lb. 8.30 - 8.40
Japanese, cs. .....lb.12.00 • —
Syn., USP, racemic, 25-lb. lots..lb. 4.25 • —
2-Mercaptobenzothiazole, bgs., fib. dms., ton lots, works, frt. alld lb. .44 • —
bgs., fib. dms. less ton lots, same basis lb. .46 • —
Mercaptobenzothiazyl disulfide, bgs., fib. dms., ton lots, works, frt. alld lb. .54 • —
bgs., fib. dms., less ton lots, same basis lb. .56 • —
Mercuric chloride, NF, cryst., dms., 100 lbs., f.o.b. works lb. 4.03 • —
USP, gran. or powd., 50-lb. dm., 100 lbs., f.o.b. works lb. 3.78 • —
Mercuric cyanide, NF VIII, powd., fib. dms lb. 5.84 • —
Mercuric iodide, red, NF, 100-lb. dm., f.o.b. works lb. 6.97 • —
Mercuric oxide, red, NF IX, 50-lb. dms., 100 lbs., f.o.b. works. lb. 4.72 • —
tech., 50-lb. dm., 100 lbs., same basis lb. 4.52 • —
Mercuric oxide, yellow, NF, 50-lb. dm., 100 lbs., same basis. lb. 4.89 • —
tech., dms., 100 lbs.....lb. 4.35 • —
25-lb. fib. dm. .....lb. 4.38 • —
Mercurous chloride (see Calomel).
Mercurous iodide, yellow, NF, 100-lb. dm. f.o.b. works lb. 8.22 • —
Mercury, ammoniated (see White precipitate, USP XV).
Mercury metal, 76 lbs. per flask. net-flask.209.00 -212.00
Mesityl oxide, dms., c.l., dlvd....lb. .15 • —
dms., l.c.l., dlvd. .....lb. .16½- —
tanks, dlvd. .....lb. .12½- —
Meta-aminophenol (see m-Aminophenol).
Metachloroaniline (see m-Chloroaniline).
Metanilic acid, dms., works .....lb. .57 • .75
Metanitroparatoluidine (see m-Nitro-toluidine).
Metanitroaniline (see m-Nitroaniline).
Metaphenylenediamine (see m-Phenylenediamine).
Metatoluidine (see m-Toluidine).
Metatolylenediamine (see 2,4-Tolylenediamine).
Methacrylic acid, glacial, 98%, dms., truckloads, frt. equald..lb. .42½- —
dms., smaller lots, frt. equald. lb. .43 • .75
tanks, works, frt. equald..lb. .40 • —
Methanol, nat, denaturing grade, tanks, frt. alld..gal. .85 • —
Syn., zone 1, dms., c.l., or t.l. min., dlvd..gal. .51½- —
dms., l.c.l., dlvd. .....gal. .61½- —
tankwagon, 2,000-4,000 gal. lots, dlvd. Metropolitan area..gal. .35 • —
tankwagon, 4,000 gal. min., dlvd..gal. .30 • —
tankwagon, 4,000 gal. min., f.o.b. terminal..gal. .29 • —
Methanol, syn., zone 2, dms., c.l., or t.l., min. frt. alld. or dlvd. gal. .55½- —
dms., l.c.l., works .....gal. .65½- —
tankwagon, 2,000-4,000 gal. lots, min., dlvd., Metropolitan area..gal. .39 • —
tanks, 4,000 gal. min., dlvd. gal. .34 • —

Synthetic methanol zones are: Zone 1 is all continental US E. of eastern boundaries of Ariz., Idaho and Utah. Zone 2 is remainder of US west of above state boundaries comprising Ariz., Calif., Idaho, Nev., Ore., Utah and Wash.

Methapyrilene fumarate, 100-999 lbs., dms., f.o.b. works, frt. equald..lb.21.75 • —
Methapyrilene hydrochloride, 100-999 lbs., dms., f.o.b. works, frt. equald..lb.27.25 • —
Methenamine (see Hexamethylene-tetramine).
Methionine hydroxyanalogue, (calcium salt) 90% min., dms., t.l., frt. alld. ....lb. 1.10 • —
dms., l.t.l., same basis.....lb. 1.16 • —
dl-Methionine, fib. dms., frt. alld., 50-lb. or more..lb. 3.50 • —
Feed grade, 98%, fib. dms., same basis..lb. 1.55 • —
Methoxychlor, 50% wettable powder, dealers, dms., cs..lb. .66 • —
Methyl abietate, non-ret. dms., c.l., dlvd. zone 1..lb. .21½- —
non-ret. dms., l.c.l., same basis lb. .22 • .22½
Methyl abietate, hydrogenated, non-ret. dms., c.l., dlvd. zone 1 lb. .23½- —
non-ret. dms., l.c.l., same basis. lb. .24 • .24½

Zone 1 includes New England and Middle Atlantic states, Va., W. Va., N. C., Ohio, Ky., Mich., Ind., Ill., Wis., St. Paul and Minneapolis, Minn.; St. Louis, Mo.; Miss., Ala., Ga., Fla., S. C. and Tenn.

Methyl acetone, nat., dms., l.c.l., E. of Miss., frt. alld..gal. .62½- —
Methyl acetone, syn., dms., c.l., frt. alld. E..gal. .66 • —
dms., l.c.l., frt. alld. E. ....gal. .76 • —
tanks, frt. alld. E. .....gal. .51 • —

Synthetic methyl acetone E. territory comprises all states East of and including Colo., Mont., N. Mex. and Wyo. West territory is made up of all states west of those four.

Methyl acrylate, dms., c.l., t.l., dlvd. lb. .39 • —
dms., l.t.l., dlvd. .....lb. .40 • —
tanks, dlvd. .....lb. .37 • —
Methyl alcohol (see Methanol).
Methyl amyl acetate, dms., c.l., dlvd. E..lb. .17 • —
dms., l.c.l., dlvd. E. .....lb. .18½- —
tanks, dlvd. E. .....lb. .14½- —
Methyl amyl alcohol, dms., c.l., dlvd. lb. .17 • —
dms., l.c.l., dlvd. .....lb. .18½- —
tanks, dlvd. .....lb. .14½- —
Methyl amyl ketone, dms., works. lb. 1.03 • —
N-Methylaniline, tech., tanks, frt. alld..lb. .60 • —
Methylanthranilate, cns. .....lb. 2.25 - 2.45
Methyl benzoate, cns., dms. ....lb. .60 - .75
Methyl bromide, service organization prices, 40 to 375-lb. cyls., large lots, frt. alld..lb. .62 • .65
Methyl cellulose, special vis., (1,500-4,000 cps.) 50-lb. bgs., c.l., works..lb. .82 • —
50-lb. bgs., 2,000-lb. lots and more, same basis.....lb. .89 • —
50-lb. bgs., smaller lots, frt. alld. on 100 lbs..lb. 1.05 • —
Standard vis. (15,400 cps.) 50-lb. bgs., c.l., frt. alld..lb. .69 • —
50-lb. bgs., 2,000-lb. lots and more, same basis.....lb. .76 • —
50-lb. bgs., smaller lots, frt. alld. on 100 lbs..lb. .79 • .82
Methyl chloride, indust., cyls., frt. equald..lb. .22¼- —
tanks, multi-unit, same basis. lb. .16¼- —
tanks, single unit, same basis. lb. .12¾- —
Refrigerator mfrs., cyls., dlvd..lb. .48¾- —
Other consumers or service men, cyls., dlvd..lb. .67¾- —
Methyl chloroform (see 1,1,1-Trichloroethane).
Methyl cinnamate, cns.....lb. 1.55 - 1.80
Methyl ethyl ketone, dms., c.l., dlvd..lb. .15 • —
dms., l.c.l., dlvd.....lb. .16¼- —
tanks, dlvd. .....lb. .12½- —
2-Methyl-5-ethyl pyridine, dms., c.l., works..lb. .45 • —
dms., l.c.l., works.....lb. .45¾- —
tanks, works .....lb. .43 • —
Methyl formate, refd., dms.....lb. .33 • .40
Tech., non-ret. dms., any quantity, works..lb. .10 • —
tanks, works.....lb. .07 • —
a-D Methyl glucoside, tech., 100-lb. multiwall paper bgs., c.l., works..lb. .21 • —
100-lb. multiwall paper bgs., t.l., min. 23,000 lbs., works. lb. .21¼- —
100-lb. multiwall paper bgs., l.t.l., works..lb. .23 • —
Methyl heptin carbonate, bots..lb.27.75 -31.00
Methyl p-hydroxybenzoate, fib. dms. lb. 1.90 - 2.00
Methyl ionone, standard, cns., dms. lb. 3.40 - 3.85
Methyl isoamyl ketone, dms., c.l., dlvd..lb. .20 • —
dms., l.c.l., dlvd. .....lb. .20½- —
tanks, dlvd. .....lb. .17½- —
Methyl isobutyl carbinol (see Methyl amyl alcohol).
Methyl isobutyl Ketone, dms., c.l., dlvd..lb. .17 • —
dms., l.c.l., dlvd.....lb. .18½- —
tanks, dlvd.....lb. .14½- —
Methyl methacrylate, dms., c.l., t.l., frt. equald, with Belle, W. Va..lb. .31 • —
dms., smaller lots, same basis..lb. .31½- —
tanks, same basis.....lb. .29 • —
Methyl naphthyl ketone, cryst., cns..lb. 2.45 - 4.30
Methyl parahydroxybenzoate (see p-Hydroxybenzoate).
Methyl parathion, tech., 80%, dms., frt. alld. E..lb. .84 • —

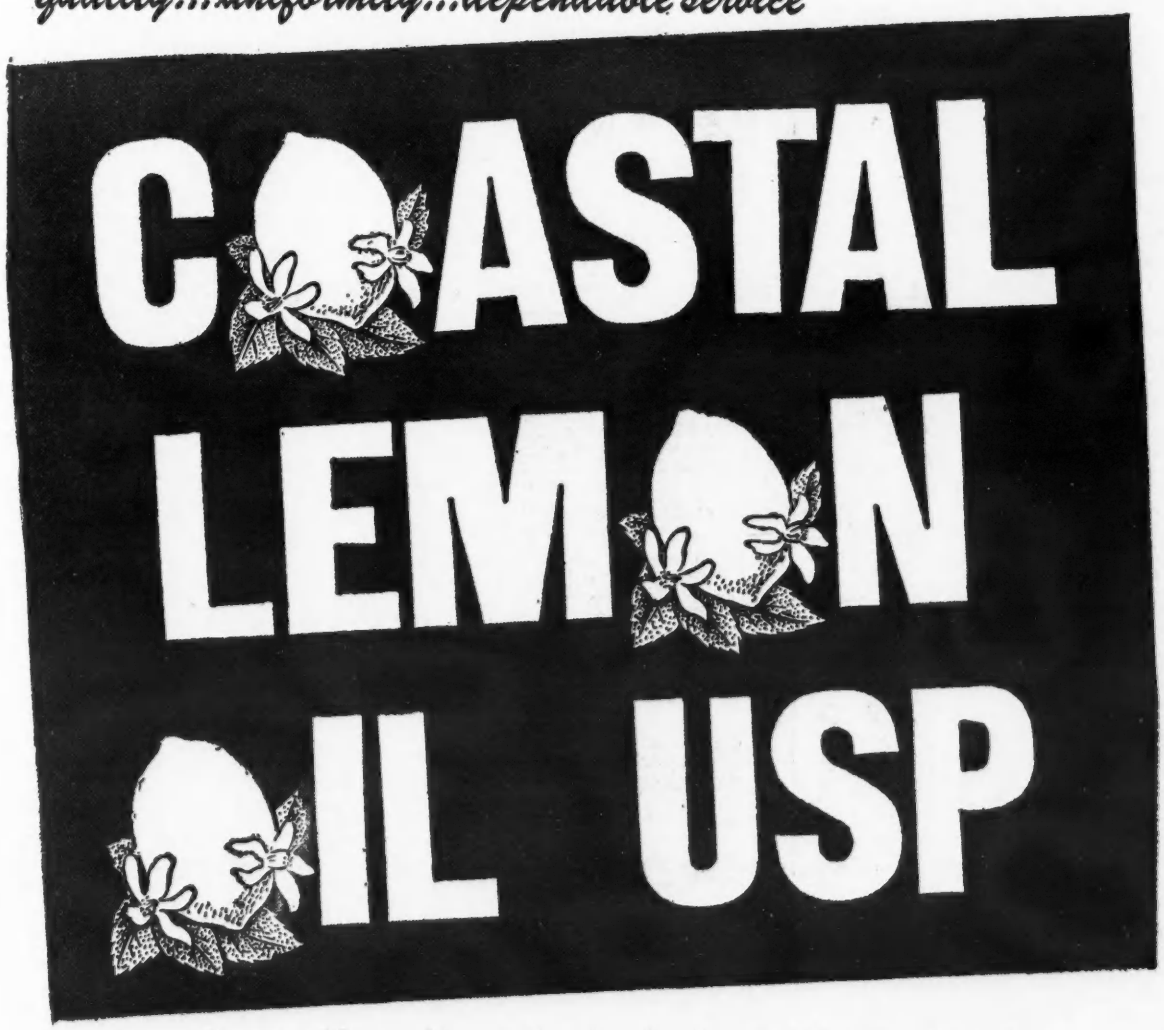
Methyl parathion prices 2c. per lb. higher in West.

Methyl roseaniline chloride, NF., 5-lb. fib. dms..lb. 6.90 • —
Methyl salicylate, dms., t.l., frt. alld..lb. .60¼- —
dms., l.c.l., same basis.....lb. .62½- .67½
Methyl testosterone, USP, 100-gram. bots gram. No Prices.
2-Methyl-5-vinyl pyridine, 40-dm. lots or more, f.o.b. works..lb. 1.30 • —
5-39 dm. lots, same basis.....lb. 1.35 • —
tanks, same basis.....lb. 1.25 • —
Methyl violet toner, molybdated, PMA, bbls., dlvd. E. of Rockies..lb. 2.80 • —
Tungstated, PTMA, bbls., same basis..lb. 4.35 • —

Methyl violet prices 1c. higher W. of Rockies.

Methylene blue, fib. dms., 100-lb. lots, frt. adjusted.....lb. 3.25 • —


*quality...uniformity...dependable service*




PURE California cold pressed lemon oil produced under continuous scientific quality control . . . bulk blended for uniformity, from desert and coastal grown lemons . . . packaged in tamper-proof containers for your protection . . . and priced to save you money. Our research and laboratory facilities have helped many users with product improvement and cost reduction...perhaps we can help you.

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**Ventura Processors, 2325 Vista Del Mar Drive, Ventura, California**

Methylene chloride, tech., straight or assorted, dms., c.l., or t.l., dlvd lb. .13½- —
dms., l.c.l., l.t.l., dlvd lb. .15¾- —
tanks, 4,000-gal. min., dlvd lb. .12¼- —
tanktrucks, 1,000-gal. min., dlvd. lb. .13¼- —
b-Methylnaphthalene, 32°C., m.p., dms., works lb .90 - —
Methylpentanediol (see Hexylene glycol).
Methylphenylpyrazolone (see 1-phenyl-3-methyl-pyrazolone-5).
Methylthionine chloride (see Methylene blue).
Mica, dry-grd., paint, plastic, 100 mesh, bgs., c.l., works lb. .04 - —
roofing, 20 to 80 mesh, works lb. .03 - —
wet-grd., biotite, bgs., c.l., works, frt. alld.E lb. .06½- —
bgs., l.c.l., ex-whse. lb. .07¼- —
paint or lacq., bgs., c.l., 325 mesh, works, frt. alld. E. lb. .08¼- —
bgs., l.c.l., ex-whse or freight alld. E lb. .09 - —
Mica, wet-grd., rubber, bgs., c.l., works, frt. alld. E lb. .08 - —
bgs., l.c.l., ex-whse. or frt. alld. E lb. .08¾- —
wallpaper, bgs., c.l., works, frt. alld.E lb. .08¾- —
bgs., ex-whse. or frt. alld E. lb. .09 - —
white, 5-10 microns, bgs., c.l., works, frt. alld. E lb. .08¼- —
Mica, wet-grd. W. of Miss. ½c. higher; W. of Rockies 1c. higher.
Microcrystalline wax, petroleum, coating grades, tankcars, works lb. .10 - .11
laminating grades, tankcars, works lb. .11 - .12
Mineral black, bgs., works lb. .0160- .0673
Mineral oil, white, tech., 50-65 vis., non-ret. dms., c.l., f.o.b. refy gal. .65 - —
50-65 vis.. non-ret. dms., l.c.l., basis gal. .70 - —
tankscars, refy. gal. .49 - —
Mineral oil, white, tech., 65-75 vis., non-ret. dms., c.l., same basis gal. .65 - —
non-ret. dms., l.c.l., same basis gal. .70 - —
tankcars, refy. gal. .49 - —
NF, 80-90% vis., non-ret. dms., c.l., same basis gal. .66 - —
non-ret. dms., l.c.l., same basis gal. .71 - —
tankcars, refy. gal. .50 - —
NF, 135-138 vis., non-ret. dms., c.l., same basis gal. .72 - —
Mineral oil, white, NF, 135-138 vis., non-ret. dms., l.c.l., same basis gal. .77 - —
tankcars, rfy. gal. .56 - —
NF, 145-155 vis., non-ret. dms., c.l., same basis gal. .78 - —
non-ret. dms., l.c.l., same basis gal. .83 - —
tankcars, refy. gal. .62 - —
Mineral oil, white, USP, 180-190 vis., non-ret. dms., c.l., same basis gal. .80½- —
non-ret. dms., l.c.l., same basis gal. .85½- —
tankcars, refy. gal. .64½- —
USP, 200-210 vis., non-ret. dms., c.l., f.o.b. refy gal. .82½- —
non-ret. dms., l.c.l. gal. .87½- —
tankcars, refy gal. .66½- —
USP, 340-350 vis., non-ret. dms., c.l., f.o.b. refy gal. .87½- —
non-ret. dms., l.c.l. gal. .92½- —
tankcars, refy. gal. .71½- —
(For f.o.b N. Y. add 2c. for tankcars; 2c. for c.l., and 3c. for l.c.l. non-ret. dms.).
Mineral orange, American, bbls., c.l., works lb. .17 - —
bbls., c.l., same basis lb. .18 - —
Mineral spirits, petroleum, odorless, tankcars, New Jersey gal. .29 - —
New York gal. .305 - —
Houston, Texas gal. .25 - —
regular, tankcars, New Jersey and New York gal. .18 - —
Group 3 gal. .12875- —
Houston, Texas gal. .145 - —
140 F flash, New York, New Jersey at terminal gal. .205 - —
Houston, Texas gal. .17 - —
Mink oil, dms. lb. 2.75 - —
Mirbane oil (see Nitrobenzene).
MNPT maroon toner, kgs., c.l., works lb. 6.30 - —
Molasses, blackstrap, feed grade, tanks, New Orleans gal. .10 - .10½
tanks, New York gal. .13½- —
Molybdated orange, bbls. lb. .49 - —
Molybdenum metal, powd., 80 or 200 mesh, ctns., works kilo. 7.84 - —
325 mesh, ctns., works kilo. 9.13 - —
Molybdenum trioxide, purif., dms., works lb. 1.15 - —
Tech., chemical, dms., works, basis Mo content lb. 1.48 - —
Tech., metallurgical, dms., works, basis Mo. content lb. 1.47 - —
Molybdic acid, 85%, dms., works. lb. 1.05 - 1.15
Monoallylamine, dms., c.l., dlvd lb. .985 - —
dms., c.l., dlvd. lb. .995 - —
tanks, dlvd. lb. .96 - —
Monobutylamine, dms., c.l., dlvd. E. of Rockies lb. .57½- —
dms., l.c.l., same basis lb. .59 - —
tanks, same basis lb. .55 - —
Mono-tert-butyl-m-cresol, dms., c.l., works lb. .55 - —
dms., l.c.l., works lb. .56 - —
tanks, works lb. .54 - —
Mono-tert-butyl-m-cresol, dms., c.l., works lb. .55 - —
dms., l.c.l., works lb. .56 - —
tanks, works lb. .54 - —
Monochloracetic acid, purif. (see Chloroacetic acid, mono).
Monochlorobenzene, dms., c.l., frt. alld. or dlvd. E lb. .10½- —
dms., l.c.l., same basis lb. .11½- —
tanks, same basis lb. .08¾- —
Monoethanolamine, dms., c.l., dlvd. E lb. .27½- —
dms., l.c.l., same basis lb. .29 - —
tanks, same basis lb. .25 - —
Monoethylalphanaphtnylamine (see
Monoethylamine, 70% aqueous, solution, dms., c.l., dlvd. E. 100% basis lb. .38½- —
dms., l.c.l., dlvd. E., 100% basis. lb. .40 - —
tanks, dlvd. E., 100% basis lb. .35 - —
Monoethylaniline (see N-Ethylaniline).
Monoethylorthotoluidine (see N-Ethyl-o-toluidine).
Monoisopropanolamine, dms., c.l., dlvd. E lb. .27½- —
dms., l.c.l., same basis lb. .29 - —
tanks, same basis lb. .25 - —
Monoisopropylamine, anhyd., dms., c.l., dlvd lb. .33¼- —
dms., l.c.l., same basis lb. .35 - —
tanks, same basis lb. .31 - —
Monomethylamine, anhyd., cyls., l.c.l., frt. equald., 100% basis lb. .30 - —
tanks, 100% basis lb. .26 - —
30-35% soln., dms., c.l., frt. equald., 100% basis lb. .36 - —
Monomethylamine, 30-35% soln., dms., l.c.l., frt. equald, 100% basis lb. .36½- —
tanks, frt. equald., 100% basis. lb. .26 - —
40% soln., dms., frt. equald., 100% basis lb. .33 - —
dms., l.c.l., frt. equald., 100% basis lb. .33½- —
tanks, frt. equald, 100% basis lb. .26 - —
Monopentaerythritol, tech., bgs., c.l., dlvd. E lb. .31 - —
bgs., l.c.l., dlvd. E lb. .32 - —
Monopotassium glutamate, dms., 1,000-lb. lots, frt. alld lb. 3.05 - —
dms., 100-lb. lots, same basis lb. 3.25 - —
Monosodium glutamate, dms., dlvd. lb. 1.07 - 1.15
Monosodium phosphate (see sodium phosphate, monobasic).
Montan wax, Calif., refd., bgs lb. .27 - .28
Imp., crude, Bohemian, bgs lb. .21 - .22
German, bgs. lb. .25 - .26
Morphine, cns., 100-oz., f.o.b. works. oz. 12.35 - —
Morphine hydrobromide, cns., 100-oz., f.o.b. works oz. 9.90 - —
Morphine hydrochloride, NF, cns., 100-oz., f.o.b. works oz. 9.90 - —
Morphine sulfate, USP, cns., 100-oz., f.o.b. works oz. 9.90 - —
Morpholine, dms., c.l., dlvd. E lb. .55¼- —
dms., l.c.l., dlvd. E lb. .56¼- —
tanks, dlvd. E lb. .52¼- —
Muriatic acid (see Hydrochloric acid).
Musk, syn., ambrette, fib. dms., 100-lb. lots lb. 4.40 - 4.90
cns., 25-lb lots lb. 4.50 - 5.00
Ketone, fib. dms., 100-lb. lots lb. 4.60 - 5.10
cns., 25-lb. lots lb. 4.70 - 5.20
Xylol, fib. dms., 100-lb. lots lb. 1.26 - —
cns., 25-lb lots lb. 1.40 - —
Mustard seed, Danish, yellow, bgs. lb. .14 - —
Montana, yellow, bgs lb. .10½- —
Oriental, bgs lb. .08 - —
Mustard, oil, syn., bots lb. 1.60 - 1.85
Myristic acid, bgs. lb. .28¼- .30¾
tanks lb. .27¼- —
Myrrh gum, cs lb. .65 - .75

## N

Naphtha, high solvency (see Solvent naphtha, petroleum).
Naphtha, petroleum, cleaner's (see Cleaner's naphtha).
Naphtha, VM&P, petroleum, tankcars, New Jersey and New York gal. .19 - —
Group 3 gal. .13875- —
Houston, Texas gal. .155 - —
Naphthalene, crude, dom., 78°, tanks, frt. equald lb. .08 - —
imp., 78°, bgs., large lots lb. .09½ Nom.
Refd., indust, chipped, crushed, bgs., frt. equald lb. .13½- —
tanks, same basis lb. .10¾- —
Naphthalene, refd., indust., balls, flakes, wholesalers, jobbers, bbls., c.l., same basis. lb. .15½- —
cs., 50 lbs., c.l., same basis. lb. .15¾- —
1-lb. pkgs., c.l., same basis. lb. .18½- —
a-Naphthol, dms., frt. alld lb. 1.02 - —
b-Naphthol, tech., flake, bbls., c.l., works lb. .34 - —
bbls., l.c.l., works lb. .36 - —
Naphthol, ITR, red toner, bbls., works lb. 5.00 - —
1-Naphthol-3,6-disulfonic 8-amino acid (see H acid).
1-Naphthol-4 sulfonic acid (see Neville and Winther's acid).
1-Naphthol-5-sulfonic acid (see L acid)
1-Naphthol-5 sulfonic 8-amino acid (see S acid).
2-Naphthol-6,8-disulfonic acid (see Gamma acid).
Naphthol sulfonic mixed acid (see Cleve's acid).
a-Naphthylamine, dms., frt. alld lb. .52 - —
b-Naphthylamine, tech., flake, bbls., works lb. 1.60 - —
1-Naphthylamine-5-sulfonic acid (see Laurent's acid).
2-Naphthylamine-4,8-disulfonic acid (see Cassella acid).
2-Naphthylamine-1-sulfonic acid (see Tobias acid).
2-Naphthylamine-6-sulfonic acid (see Broenner's acid)
2-Naphthylamine-7-sulfonic acid (see F acid).
Naringin, fib. dms. lb. 8.50 - —
Neatsfoot oil, 15° cold test, dms lb. .29 Nom.
20° cold test, dms. lb. .28 Nom.
30° cold test, dms. lb. .27 Nom.
Neocinchophen, USP, dms., frt. adjusted lb. 7.00 - 8.00
Neomycin sulfate, fib. dms., 1-kilo basis activity gram. .25 - —
fib. dms., 100-999-gram lots, basis activity gram. .30 - —
Tech., fib. dms gram. .13½- —
Neopentylglycol, dms., c.l., dlvd lb. .32 - —
dms., l.c.l., same basis lb. .33 - —
Nerol, dms. lb. 4.75 - —
Neroli oil, NF, French, bots lb. 425.00 - 575.00
Tunisian, bots. lb. 400.00 - —
Nerolin, cns. lb. 2.45 - 2.85
Neville and Winther's acid, dms., frt. alld lb. 1.40 - —
Niacinamide (see Nicotinamide).
Nickel acetate, bbls., dlvd lb. .68½- .75½
Nickel carbonate, bbls., dlvd lb. 78¼- .85¼
Nickel chloride, bbls., dlvd. lb. .37 - .45
Nickel formate, bbls., ton lots, frt. alld lb. .72 - .73
Nickel metal, electro cathodes, cs., works lb .74 - —
Nickel nitrate, dms., frt. alld lb. .31½- .33½
Nickel oxide, black, bbls. lb. .85 - —
Green, bbls. lb. .84 - —
Nickel sulfate, bgs., c.l., dlvd lb. .28 - —
bgs., l.c.l., dlvd. lb. .28½- .36
Nicotinamide, USP, 50-kilo., dms., 100 kilos., dlvd kilo. 6.50 - —
dms., less than 100 kilos, dlvd. kilo. 6.60 - 7.00
Nicotine sulfate, 40%, dealers, 50-lb. dms. frt. alld lb. 1.20 - —
40%, manufacturers, 500-lb. dms., frt. alld lb. 1.05 - —
Nicotinic amide, USP (see Nicotinamide).
Niger seed, bgs. lb. .10¼- —
Nikethamide, cbys. lb. 5.00 - —
Nitric acid, 36° Be., cbys., c.l., works E 100 lbs. 5.75 - —
cbys., l.c.l., works E 100 lbs. 6.05 - 6.85
38° Be., cbys., c.l., works E. 100 lbs. 6.25 - —
cbys., l.c.l., works E 100 lbs. 6.55 - 7.35
40° Be., cbys., c.l., works E. 100 lbs. 6.75 - —
cbys., l.c.l., works E 100 lbs. 7.05 - 7.85
42° Be., cbys., c.l., works E. 100 lbs. 7.25 - —
cbys., l.c.l., works E 100 lbs. 7.55 - 8.35
58.5 to 68%, $HNO_3$, tanks, works, 100% basis 100 lbs. 3.90 - —
94½ to 95½% $HNO_3$, tanks, works, 100% basis 100 lbs. 4.90 - —
CP, NF, consumer, cbys., extra, c.l., works lb. .18½- —
cbys., extra, l.c.l., works. lb. .20 - —
5-pint bots., extra, cs., c.l., same basis lb. .22½- —
5-pint bots., extra, cs., l.c.l., same basis lb. .24 - .25
dms., frt. alld lb. .99 - —
m-Nitroaniline, cryst., dms., frt. alld lb. 1.15 - —
Paste, dms., frt. alld., 100% basis. lb. 1.10 - —
o-Nitroaniline, flaked, dms., t.l., frt. alld lb. .49 - —
dms., l.t.l., frt. alld. lb. .51 - —
o-Nitroaniline orange toner, kgs. lb. 1.35 - —
p-Nitroaniline, c.l., t.l., dms., frt. alld lb. .445 - —
dms., l.c.l., same basis lb. .46½- —
o-Nitroanisole, tech., tanks, frt. alld. lb. .36 - —
p-Nitroanisole, tech., solid, dms., frt. alld lb. .72 - —
Nitrobenzene, dbl. dist., dms., c.l., frt. alld lb. .13 - —
dms., l.c.l., frt. alld. lb. .14 - —
tanks, frt. alld. lb. .11 - —
p-Nitrobenzoic acid, dms., c.l., works lb. .63 - —
4-Nitro-2-aminophenol, tech., paste, dms., l.c.l., works lb. .64 - —
Nitrocellulose, ester-soluble, 30-35 cps., ¼, ½, ¾, 5-6, 15-20, 30-40, 60-80, 125-175 seconds, bbls., c.l., works lb. .37½- —
bbls., l.c.l., same basis lb. .33½- .40½
18-20, cps., bbls., c.l., same basis lb. .39½- —
bbls., l.c.l., same basis lb. .40½- .42½
250-400, 600-1,000 seconds, bbls., l.c.l., same basis lb. .43 - .46
Nitrocellulose, spirit soluble, 30-35 cps., ¼, ½ seconds, bbls., c.l., same basis lb. .43 - —
bbls., l.c.l., same basis lb. .44 - .46
5-6 cps., 40-60 seconds, bbls., c.l., same basis lb. .42 - —
bbls., l.c.l., same basis lb. .43 - .45

Denatured alcohol used in the manufacture of nitrocellulose is charged extra. Drums extra but returnable.

o-Nitrochlorobenzene, dms., c.l., frt. alld lb. .15 - —
dms., l.c.l., same basis lb. .16 - —
tanks, same basis lb. .13 - —
p-Nitrochlorobenzene, dms. lb. .26 - .27
2-Nitro-p-cresol, tech., dms., dlvd lb. .88 - —
Nitroethane, dms., c.l., dlvd. E lb. .25 - —
dms., l.c.l., dlvd. E lb. .26½- —
tanks, dlvd E. lb. .22½- —

Nitroethane prices West of Rockies are 1c. higher.

Nitrogen solutions, tanks, frt. equald, N unit. 1.26 - —
Nitrogen tetroxide, indust., tankcars, f.o.b. Hopewell, Va lb. .065 - —
Cyls., t.l., min. 5 tons, same basis lb. .07¼- —
Cyls., l.c.l., l.t.l., same basis lb. .15 - —
Nitrogenous process tankage, bulk, works unit-ton. 4.50 - 5.00
Nitrogenous sewage sludge, bulk, f.o.b. Chicago, works. unit-ton. 2.95 - —
Nitromethane, dms., t.l., dlvd. E lb. .25 - —
dms., l.t.l., dlvd. E lb. .26½- —

Nitromethane prices West of Rockies are 1c higher.

a-Nitronaphthalene, bbls., frt. alld. lb. .31 - —
o-Nitrophenol, dms., works, frt. equald lb. .94 - —
p-Nitrophenol, dms., c.l., frt. alld. lb. .45 - —
dms., l.c.l., frt. alld lb. .47 - —
1-Nitropropane, dms., c.l., frt. alld. E. of Rockies lb. .23½- —
dms., l.c.l., same basis lb. .25 - —
tanks, same basis lb. .21 - —
2-Nitropropane, dms., c.l., frt. alld. E of Rockies lb. .18½- —
dms., l.c.l., same basis lb. .20 - —
tanks, same basis lb. .16 - —

Nitropropane prices West of Rockies are 1c per lb. higher.

m-Nitrotoluene tech., dms., frt. alld. lb. .50 - —
o-Nitrotoluene, dms., c.l., frt. alld lb .15 - —
dms., l.c.l., frt alld. lb. 16 - —
tanks, frt. alld. lb. .13 - —
p-Nitrotoluene, tech., cast, dms., c.l., works lb. .27½- —
dms., l.c.l. works lb. .28 - —
flake, dms., c.l., t.l., works lb. .27½- —
dms., l.c.l., works lb. .28 - —
m-Nitro-p-toluidine, dms. lb. 1.25 - —
Nonylphenol, dms., c.l, frt. alld. lb. .22 - —
dms., l.c.l., frt. alld lb. .23 - —
tanks, frt. alld. lb. .19½- —

Nonylphenol prices on shipments to Western States are 2c. higher.

Nutmegs, East Indian, whole, bgs. lb. 1.34 - 1.35
West Indian, bgs. lb. 1.28 - 1.29
Nutmeg oil, USP, dist., East Indian, cns. lb. 9.00 -12.00
West Indian, cns. lb. 9.00 -12.00
Nux vomica, bls. lb. .20 - —
Powd., bbls., bxs. lb. .20 - .22

## O

Ocher (see Iron oxide yellow, nat.).
Ocotea cymbarum oil, dms lb. .48 - .53
Octane, indust., tanks, Bayonne, N.J. gal. .20 - —
Borger, Tex. gal. .15¾- —
1-Octanol, tech., dms., c.l., dlvd., Zone 1 lb. .43½- —
dms., l.c.l., dlvd. Zone 1—lb. .45½- —
tanks, dlvd., Zone 1 lb. .41 - —
Octyl alcohol, perfumers grade, bots. lb. 1.60 - 3.25
Octyl alcohol, tech, (see 1-Octanol, tech).
tert-Octylamine, dms., c.l., t.l., f.o.b. works lb. .54½- —
dms., l.c.l., same basis lb. .55 - —
Octyl phenol, bgs., c.l., works lb. .22 - —
bgs., l.c.l., works lb. .22½- —
tanks, works lb. .21 - —
Octyl phenol in dms., 11c. higher.

## OILS

**Oil quotations are listed individually. For example, prices on Oil, coconut, may be found in the C's under Coconut oil.**

Oiticica oil, liq., dms. lb. .16 - .16½
tanks lb. .14 - —
Oleic acid, dbl.-dist. (white), dms. lb. .17½- .20
tanks lb. .15 - —
S.d., dms. lb. .16¼- .18¾
tanks lb. .13¾- —
Oleo oil, extra, dms. lb. .14½- .14¾
Oleostearine, dms. lb. .12½- .12¾
Oleum (see Sulfuric acid, fuming).
Olibanum gum, siftings, cs lb. .15 - .20
Tears, cs. lb. .22 - .30
Olibanum oil, bots lb. 5.00 - 7.65
Extra fine, bots lb. 8.00 - 9.50
Olive oil, edible, dms., spot, duty-paid. gal. 2.30 - 2.35
Olivine, crude, works ton. 12.00 - —
20 mesh, works ton. 15.00 - —
100 mesh works ton. 20.00 - —
Opium, USP, cns., 25-lbs., f.o.b. works oz. 19.20 - —
gran., cns., 50 lbs., same basis. oz. 21.65 - —
powd., cns., 50 lbs., same basis. oz. 21.65 - —
Orange oil, expressed, USP, Calif., cns., dms lb. .70 - .90
Calif., sweet., cns., dms lb. .60 - —
Florida, cns., dms. lb. .45 - .50
Messina, cns. lb. 3.25 - 5.00
West Indian, bitter, cns., dms., lb. 2.50 - 3.50
Orange peel, bitter, Haitian, bls lb. .18 - .20
Sweet lb. .28 - .30
Origanum oil, Spanish, cns lb. 1.80 - 2.30

## ORANGE PIGMENTS

**Orange pigment quotations are listed individually. For example, prices on Orange, chrome, may be found in the C's under Chrome orange.**

Orris root, Florentine, bls lb. .55 - —
powd., bbls., bxs lb. .65 - —
Verona, bls lb. .35 - —
powd., bbls., bxs lb. .45 - —
Orthoanisidine (see o-Anisidine).
Orthochlorobenzaldehyde (see o-Chlorobenzaldehyde).
Orthochloroaniline (see o-Chloroaniline).
Orthochlorobenzoic acid (see o-Chlorobenzoic acid).
Orthochloroparanitroaniline (see 2-Chloro-4-nitroaniline).
Orthochlorophenol (see o-Chlorophenol).
Orthocresol (see o-Cresol).
Orthocresotinic acid (see 2,3-Creosotic acid).
Orthodichlorobenzene (see o-Dichlorobenzene).
Orthonitroaniline (see o-Nitroaniline).
Orthonitrochlorobenzene (see o-Nitrochlorobenzene).
Orthonitroparachlorophenol (see 2-Nitro-4-Chlorophenol).
Orthonitrophenol (see o-Nitrophenol).
Orthonitrotoluene (see o-Nitrotoluene).
Orthophenetidine (see o-Phenetidine).
Orthophenylphenol (see o-Phenyl phenol).
Ortho-tertiary amylphenol (see o-tert-Amylphenol).
Orthotolidine (see o-Tolidine base).
Orthotoluidine (see o-Toluidine).
Ouabain, USP, bots. gram. 3.00 - 4.00
Ouricury wax, crude, bgs lb. .52 - .53
Refd., pure, bgs. lb. .58 - .60
Oxalic acid, bgs., dms., c.l., works. lb. .18 - .18¼
bgs., dms., 10,000-lb. lots, works lb. .19 - .19¼
bgs., dms., smaller lots, works. lb. .20½- .21
b-Oxynaphthoic acid, pigment manufacture, dms., frt. alld lb. .912 - —
Dyestuff manufacture, dms., same basis lb. 1.03 - 1.14
Oxyquinolin sulfate, cns., 100-lb. lots, works lb. 4.75 - 5.00
cns., smaller lots, works lb. 4.92 - 5.17

## P

Palm oil, clarif., dms lb. .1440- .1540
tanks lb. .1150- —
Palm oil acid, dist., dms. lb. .15¾- .19¼
tanks lb. .13¾- .14¼
Palmarosa oil, cns. lb. 4.45 - 6.00
Papain, powd., bots. lb. 5.50 -10.00
Papaverine hydrochloride, nat. or syn., USP, cns., 25-oz. to 100-oz. lots oz. 5.00 - —
cns., smaller lots oz. 5.05 - 5.20
Papaverine sulfate, nat. or syn., USP, cns oz. 7.10 - 7.35
Paprika, Bulgarian, bgs. lb. .27 - —
Hungarian, bgs. lb. .29 - —
Spanish, bgs. lb. .33 - —
Yugoslavian, bgs. lb. .29 - .30
Para-aminobenzoic acid (see p-Aminobenzoic acid).
Parachlorobenzoic acid (see p-Chlorobenzoic acid).
Paramethylphenylcinchonic acid (see Neocinchophen).
Paranitrobenzoic acid (see p-Nitrobenzoic acid).
Paratoluidinemetasulfonic acid (see p-Toluidine-m-sulfonic acid).
Para-aminophenol (see p-Aminophenol).
Parachloro-orthonitroaniline (see 4-Chloro-2 nitroaniline).
Para-anisidin (see p-Ansidine).
Parachloraniline (see p-Chloraniline).
Parachlorobenzaldehyde (see p-Chlorobenzaldehyde).
Parachlorophenol (see p-Chlorophenol).
Paracresol (see p-Cresol).
Paradibromobenzene (see p-Dibromobenzene).
Paradichlorobenzene (see p-Dichlorobenzene).
Para toner, red, bbls. lb. 1.21 - —
Chlorinated, kgs. lb. 1.36 - —
Paraffin, crude, scale, white, 123°-127°F., ASTM, tanks, refy. lb. .0655- —
Paraffin, fully refd., 122°-124°F., ASTM, tanks, refy lb. .0765- —
125°-127°F., ASTM, tanks, refy. lb. .0765- —
130°-132°F., ASTM, tanks, refy. lb. .0765- —
132°-134°F., ASTM, tanks, refy. lb. .0765- —
135°-137°F., ASTM, tanks, refy. lb. .0765- —

AMP temperatures are an arbitrary 3°F. higher than ASTM.

Paraffin oil, pale, 100-110 vis., at 100°F., tanks east coast refy. gal. .14 - —
Paraffin wax (see Paraffin).
Paraformaldehyde, 91%, flake, bgs., c.l., frt. alld lb. .10 - —
bgs., l.c.l., frt. alld lb. .12 - .13
91%, powd., bgs., c.l., ex whse. lb. .1715- —
bgs., l.c.l., ex whse lb. .1865- —
USP-X, fib. dms., c.l. lb. .19 - —
fib. dms., 1,000-lb. lots lb. .20 - —
fib. dms., smaller lots lb. .21½- —
Paraldehyde, tech., 96%, 55-gal. dms., t.l., dlvd lb. .14 - —
55-gal. dms., l.c.l., dlvd lb. .15 - —
tanks, dlvd. lb. .11½- —
Paranitroaniline (see p-Nitroaniline).
Paranitrochlorobenzene (see p-Nitrochlorobenzene).

**Paranitrotoluene (see p-Nitrotoluene).**
**Paranitrophenol (see p-Nitrophenol).**
**Paraphenetidine (see p-Phenetidine).**
**Paraphenylenediamine (see p-Phenylenediamine).**
**Paraphenylphenol (see p-Phenylphenol).**
**Para-tertiary-amylphenol (see p-tert-Amylphenol).**
**Para-tertiary butylphenol (see p-tert-Butylphenol).**

| | | | |
|---|---|---|---|
| **Parathion, ethyl, dms., frt. alld** | lb. | .84 | — |

Parathion prices 2c. per lb. higher in West.

| | | | |
|---|---|---|---|
| **Paratoluenesulfonamide (see p-Toluenesulfonamide).** | | | |
| **Paris green, dealers, 100 lb. dms., frt. alld** | lb. | .45 | — |
| **Passion flower herb, bls.** | lb. | .45 | .50 |
| **Patchouli oil, imp., cns.** | lb. | 5.60 | 6.50 |

**Peach kernel oil, USP (see Apricot kernel oil).**

| | | | |
|---|---|---|---|
| **Peacock blue, fugitive, 100% color strength, 250-lb. bbls., dlvd. E. of Rockies** | lb. | 1.00 | — |

Peacock blue price 1c. higher W. of Rockies.

| | | | |
|---|---|---|---|
| **Peanut meal, old process, 45%, bgs., f.o.b. mills** | ton. | 55.00 | Nom. |
| solvent, same basis | ton. | 50.00 | Nom. |
| **Peanut oil crude, tanks, f.o.b. mills.** | lb. | .15¼- | — |
| Refd., dms. | lb. | .20½- | .21 |
| tanks | lb. | .18½- | — |
| **Pectin, dom., NF, citrus, powd., bbls.** | lb. | 2.05 | 2.06 |
| Dom., tech., powd., 150 jelly grade, bbls | lb. | 1.28 | — |
| Imp., Danish, bbls., ex whse | lb. | 1.28 | — |
| **Pelargonic acid, dms., c.l., dlvd** | lb. | .25 | — |
| ton lots, same basis | lb. | .27½- | — |
| tanks, same basis | lb. | .23½- | — |
| **Penicillin, potassium, cryst., bulk, 1,000,000 units.** | | .021 | — |
| **Penicillin, procaine, cryst., bulk, 1,000,000 units.** | | .023 | — |
| **Pennyroyal oil, USP, imported, cns.** | lb. | 1.95 | 2.70 |
| **Pentachlorophenol, bgs., c.l., t.l., works, frt. equald** | lb. | .21 | — |
| bgs., l.c.l., same basis | lb. | .22½ | .29 |

Pentachlorophenol in dms. 1c. higher.

| | | | |
|---|---|---|---|
| **Pentaerythritol, tech., bgs., c.l., dlvd** | lb. | .31 | — |
| bgs., l.c.l., dlvd. | lb. | .32 | — |

**Pentaerythritol, di- and tri-isomers (see Dipentaerythritol and Tripentaerythritol).**

| | | | |
|---|---|---|---|
| **Pentane, indust., tanks, Tex. refy.** | gal. | .14 | — |
| **Pentobarbital, dms., 100 lbs. or more** | lb. | 6.00 | — |
| **Pepper, black, Malabar, bgs** | lb. | .57 | — |
| Lampong, bgs. | lb. | .57 | — |
| Red, Funtuas, bgs. | lb. | .32 | — |
| Japanese, Hontoka, bgs. | lb. | .57½ | — |
| Santaka, bgs. | lb. | .31½ | — |
| Sudanese, bgs. | lb. | .36 | — |
| White, Muntok, bgs | lb. | .82 | — |
| **Peppermint leaves, dom., USP, bls., dms** | lb. | .70 | .75 |
| Imp., USP, bls. | lb. | .85 | — |
| **Peppermint oil, nat., dms** | lb. | 4.40 | 4.60 |
| Redist., USP, dms | lb. | 4.75 | 5.25 |
| **Perchloroethylene, dms., c.l., or t.l., dlvd** | lb. | .13½- | — |
| dms., l.c.l., dlvd. | lb. | .15½- | — |
| tanks, dlvd. | lb. | .11¾- | — |
| tanktruck, 1,000 gal. min. dlvd | lb. | .12¼- | — |
| **Peri acid, dry, bbls., frt. alld** | lb. | 1.60 | — |
| Paste, bbls., frt. alld | lb. | 1.55 | — |
| **Peru balsam, dms.** | lb. | 1.10 | 1.50 |

**Persic oil, USP (see Apricot kernel oil).**

| | | | |
|---|---|---|---|
| **Petitgrain oil, South American, cns., dms** | lb. | 2.40 | — |
| **Petrolatum, cream, dms., c.l., refy.** | lb. | .08125- | — |
| dms., l.c.l., dlvd. | lb. | .10125- | .11375 |
| tanks, refy. | lb. | .05375- | — |
| Extra amber, dms., c.l., refy. | lb. | .07125- | — |
| dms., l.c.l., dlvd. | lb. | .09125- | .10375 |
| tanks, refy. | lb. | .04875- | — |
| **Petrolatum, lily white, dms., c.l., refy** | lb. | .08625- | — |
| dms., l.c.l., dlvd. | lb. | .10625- | .12 |
| tanks, refy. | lb. | .06735- | — |
| **USP, snow white, dms., c.l., refy.** | lb. | .09125- | — |
| dms., l.c.l., dlvd | lb. | .11125- | .125 |
| tanks, refy. | lb. | .06875- | — |
| **Petrolatum, USP, soft yellow, dms., c.l., refy** | lb. | .07125- | — |
| dms., l.c.l., dlvd. | lb. | .095 - | .10375 |
| tanks, refy. | lb. | .04875- | — |

**Petroleum pitch (see Asphalt, petroleum).**

**PETROLEUM PRODUCTS**
**Petroleum product quotations are listed individually. For example, prices on Petroleum, mineral spirits, may be found in the M's under Mineral spirits, petroleum.**

| | | | |
|---|---|---|---|
| **Petroleum sulfonate, oil soluble, 60-62% sulfonic content, non-ret. dms., c.l., works.** | lb. | .16½- | .18¾ |
| non-ret. dms., l.c.l., works | lb. | .17½- | .19 |
| tanks, works | lb. | .14½- | .17 |
| **50-55%, sulfuric content, non-ret. dms., c.l., works** | lb. | .16 | — |
| non-ret. dms., l.c.l., works | lb. | .17 | — |
| tanks, works | lb. | .13 | — |
| **o-Phenetidine, dms., c.l., frt. alld, E.** | lb | .91 | — |
| dms., l.c.l., same basis | lb. | .93 | — |
| **p-Phenetidine, dms., c.l., frt. alld.** | lb. | 1.05 | — |
| dms., same basis | lb. | 1.08 | — |
| **Phenobarbitol, USP, dms., 100-lbs., frt. alld** | lb. | 3.25 | — |

**Phenobarbital-Sodium (see sodium phenobarbital).**

| | | | |
|---|---|---|---|
| **Phenol, 90-92% (cresol 8-10%), non-ret. dms., frt. alld. E. of Rockies** | lb. | .16¾- | — |
| non-ret. dms., l.c.l., same basis. | lb. | .17¾- | — |
| tanks, same basis | lb. | .14¾- | — |
| **82-84% (cresol 16-18%) non-ret. dms., c.l., same basis** | lb. | .16½- | — |
| non-ret dms., l.c.l., same basis. | lb. | .17½- | — |
| tanks, same basis | lb. | .14½- | — |
| **30°C., or above, tar dist., non-ret. dms., c.l., same basis** | lb. | .18 | — |
| **Phenol, 30°C., or above, tar dist., non-ret. dms., l.c.l., same basis.** | lb | .19 | — |
| tanks, same basis | lb. | .16 | — |
| **USP, syn., dms., c.l., t.l., frt. alld** | lb. | .18½- | — |
| dms., same basis | lo. | .20½- | — |
| tanks, same basis | lb. | .16½- | — |
| **Phenolphthalein, USP or yellow, 250-lb. dm., 2,000 lbs., frt. alld** | lb. | 1.30 | — |
| 250-lb dm., same basis | lb. | 1.35 | — |
| **Phenothiazine drench, fib. dms., t.l., dlvd** | lb. | .44 | — |
| fib. dms., l.t.l., same basis | lb | .47 | — |
| NF, fib. dms., t.l., same basis | lb. | .43 | — |
| fib. dms., l.t.l. same basis | lb. | .46 | — |
| **Phenyl acetate, dms., 100-lb. lots, works** | lb. | .50 | — |

**Phenyl salicylate (see Salol).**

| | | | |
|---|---|---|---|
| **Phenylacetaldehyde, soln., 50%, bots.** | lb. | 2.35 | — |
| 100%, bots. | lb. | 4.00 | 4.65 |
| **Phenylacetic acid, pura, cryst., cns.** | lb. | 1.25 | 1.75 |
| **dl-Phenylalanine, dms., works** | lb. | 27.00 | 37.50 |
| **l-Phenyl-3-carbethoxy pyrazolone-5, fib. dms., 200-lb. lots, dlvd. E** | lb. | 3.45 | — |
| **fib dms., smaller lots, dlvd. E** | lb. | 3.80 | — |
| **N-Phenyldiethanolamine, dms., c.l., dlvd. E** | lb. | .41 | — |
| dms., l.c.l., dlvd. E. | lb. | .42½- | — |
| tanks, dlvd. E. | lb. | .38½- | — |
| **m-Phenylenediamine, dms., frt. alld.** | lb. | 1.10 | — |
| **o-Phenylenediamine, coml, fib. dms, 100 to 1,000 lbs., works.** | lb. | 1.70 | 1.80 |
| **p-Phenylenediamine, tech., dms, works** | lb. | 1.55 | — |
| **Phenylethanolamine, dms., c.l., works** | lb. | .75½- | — |
| dms., l.c.l., same basis | lb. | .77 | — |
| **Phenylethyl acetate, bots.** | lb. | 1.25 | 1.40 |
| **2-Phenylethyl alcohol, extra, dms.** | lb. | 1.14 | 1.50 |
| **Standard, dms.** | lb. | 1.10 | 1.60 |
| **b-Phenylethylamine, dms., 20,000 lbs. or more, frt. alld** | lb. | 1.50 | — |
| dms., smaller lots, frt. alld | lb. | 1.70 | 1.85 |
| **Phenylethylphenyl acetate, bots** | lb. | 4.00 | 4.25 |

**Phenylglyconic acid (see Mendelic acid).**

| | | | |
|---|---|---|---|
| **Phenylhydrazine 97%, 450-lb. dms.** | lb. | 1.45 | — |
| **1-Phenyl-3-methyl pyrazolone-5, fib. dms., 250-lb. lots, dlvd. E** | lb. | 1.80 | — |
| **fib. dms., smaller lots, dlvd. E** | lb. | 2.10 | — |
| **o-Phenylphenol, dms., t.c.l., works.** | lb. | .48 | .50 |
| **p-Phenylphenol, bgs., c.l., works** | lb. | .38½- | — |
| bgs., l.c.l., works | lb. | .43 | — |
| **Philippine copal gum, pale, chips, bgs** | lb. | .23¾ | .26 |
| nubs, bgs. | lb. | .33¼- | .37 |
| seeds, bgs. | lb. | .20 | Nom. |
| sorts, bgs. | lb. | .20 | .24 |
| **Phloroglucinol, coml., fib. dms., works** | lb. | 6.40 | — |
| CP, bots., works | lb. | 17.75 | — |
| Tech., fib. dms., works | lb. | 10.45 | — |

**Phloxin red toner (see Eosin red toner).**

| | | | |
|---|---|---|---|
| **Phosgene, ret. cyls., works** | lb. | .15½- | — |

**Phosphate, defluorinated (see under D).**

| | | | |
|---|---|---|---|
| **Phosphate rock, Curacao, Atlantic ports, New Orleans** | ton. | 42.00 | — |
| **Phosphate rock, Florida, land pebble, run-of-mine, washed, dried, unground, 66-68%, b.p.l., bulk, c.l., mines.** | short-ton. | 5.298 | — |
| 68-70%, b.p.l., bulk, c.l., same basis | short-ton. | 5.643 | — |
| 70-72%, b.p.l., bulk, c.l., same basis | short-ton. | 6.228 | — |
| 74-75%, b.p.l., bulk, c.l., same basis | short-ton. | 7.128 | — |
| 76-77%, b.p.l., c.l., bulk, same basis | short ton. | 8.018 | — |

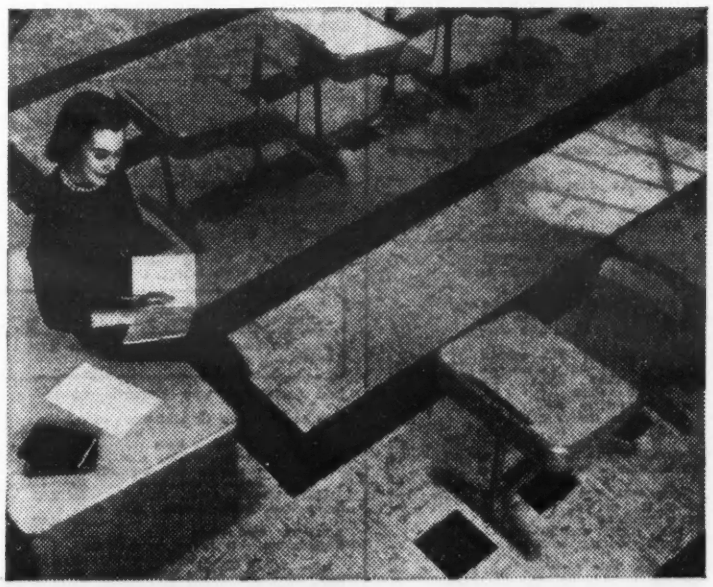
Above Florida prices are based on fuel oil at $2.37 per bbl. and labor at $1.59.

| | | | |
|---|---|---|---|
| **Phosphoric acid, food grade, 75%, cbys., c.l., works, E., frt. equald** | 100 lbs. | 7.00 | — |
| cbys., l.c.l., same basis | 100 lbs. | 7.25 | 7.75 |
| tanks, t.w., works | 100 lbs. | 5.60 | — |
| 80%, cbys., c.l., frt. equald | 100 lbs. | 7.85 | — |
| cbys., l.c.l., works | 100 lbs. | 8.10 | 9.35 |
| tanks, t.w., works | 100 lbs. | 6.00 | — |
| NF, 85%, cbys., c.l., works. | 100 lbs. | 8.50 | — |
| cbys., l.c.l., works | 100 lbs. | 8.75 | 9.00 |
| tanks, t.w., works | 100 lbs. | 6.65 | — |
| **Phosphorus, amorph., red, dms., t.l., works** | lb. | .55 | — |
| dms., smaller lots, works | lb. | .56 | .57 |
| **white (yellow), solid, dms., c.l., works, frt. equald** | lb. | .20 | .20½ |
| dms., l.c.l., works, frt. equald | lb. | .21½- | — |
| tanks, works, frt. equald. | lb. | .19 | — |
| **Phosphorus oxychloride, dms., c.l., works** | lb. | .14 | — |
| dms., l.c.l., works | lb. | .15 | — |
| tanks, works, frt. equald | lb. | .12½- | — |
| **Phosphorus pentasulfide, powd., dms., c.l., works** | lb. | .13½- | — |
| dms., l.c.l., works | lb. | .14½- | .15½ |
| **Solid, dms., c.l., works** | lb. | .11½- | — |
| dms., l.c.l., works | lb. | .12½- | .13½ |
| **Phosphorus pentoxide, dms., c.l., works** | lb. | .1375- | .1475 |
| dms., l.c.l., works | lb. | .1475- | .1675 |
| **Phosphorus sesquisulfide, dms., cs., c.l., works** | lb. | .38 | — |
| dms., l.c.l., works | lb. | .39 | .40 |
| **Phosphorus trichloride, dms., c.l., works** | lb. | .14 | — |
| dms., l.c.l., works | lb. | .15 | — |
| tanks, works | lb. | .12½- | — |
| **Phthalic anhydride, bgs., c.l., works, frt. equald** | lb. | .19 | .23 |
| bgs., l.c.l., same basis | lb. | .20 | .24 |
| tanks, same basis | lb. | .18½- | .22½ |
| **Phthalimide, 97-98%, dms., frt. alld** | lb. | .65 | — |


# HOW *HERCULES* HELPS...

## QUENCH A SUMMER THIRST

Your summer picnics will be more delicious when you keep your drinks in Aladdin's new Dura-Clad vacuum bottles. Molded in one piece with Pro-fax®, Hercules polypropylene, its design permits you to keep your drinks piping hot or frosty cool. The jacket's Pro-fax construction makes it crack-proof and resistant to stains, scratches, and heat. The unusual "Pitcher Pour" handle feature makes it safer and more convenient to handle.



## BEAUTIFY CLASSROOM FLOORS

The extreme durability of solid vinyl and vinyl-asbestos floor tile is just one of the many reasons for use in classrooms and other institutions. Despite heavy traffic and hard usage, vinyl flooring retains its color, requires a minimum of care, and holds a constant gloss throughout its long service life. All of these end-use advantages are maintained when vinyl flooring manufacturers use Neolyn® resin modifiers made by Hercules. And to the vinyl floor tile manufacturer, a Neolyn resin in the product means ease of processing, improved color stability, and an economical way of reducing binder content or increasing low-cost fillers without impairing the surface of the tiles.

HERCULES

*HERCULES POWDER COMPANY*
INCORPORATED
*900 Market Street, Wilmington 99, Delaware*

**CHEMICAL MATERIALS FOR INDUSTRY**

Phthalocyanine blue, full strength, bbls., dlvd. E. of Rockies.
Resinated, bbls., same basis ... lb. 2.90 : —
Water dispersable, bbls., same basis ... lb. 3.00 : —
Pythalocyanine blue prices 1c. higher W. of Rockies.

Phthalocyanine green toner, bbls., works ... lb. 3.35 : —
Resinated, bbls. ... lb. 3.00 : —
Water dispersable, bbls. ... lb. 1.71 : —
Phthalocyanine green prices 1c. higher W. of Rockies.

Phthalylsulfacetamide, fib. dms., 1-000-lb. lots or more ... lb. 5.00 : —
NF, fib. dms. ... lb. 5.20 : —
α-Picoline, dms., c.l., works, frt. equald ... lb. .42 - .46
dms., l.c.l., works, frt. equald ... lb. .422 - .46½
tanks, same basis ... lb. .41½- .43
b-Picoline, 98%, dms., t.l., works. ... lb. 1.05 : —
dms., l.c.l., same basis ... lb. 1.15 : —
tanks, same basis ... lb. .95 : —
b,g-Picoline, 5°C, dms., c.l., works. ... lb. .32½- —
dms., l.c.l., works ... lb. .33 : —
g-Picoline, dms., f.o.b., works ... lb. 1.60 : —
tanks, t.l., same basis ... lb. 1.50 : —
Picric acid, NF, bbls. ... lb. .85 : —
Tech., bbls. ... lb. .44 : —
Pigment green B, kgs. ... lb. 1.50 : —
Pilocarpine hydrochloride, USP, bots ... oz. 5.25 : —
Pilocarpine nitrate, USP, bots., vials. ... oz. 5.15 : —
Pimento, Jamaincan, bgs. ... lb. .68½- —
Mexican, bgs. ... lb. .56 : —
Pimento berry oil, NF, dms. ... lb. 3.75 - 9.25
Pimento leaf oil, crude, cns. ... lb. 2.20 - 2.60
Pine oil, dest.-dist., dms., l.c.l. works ... lb. .15 : —
dms., l.c.l. ex whse. New York. ... lb. .173 : —
Steam-dist., dms., ex whse., New York ... lb. .185 : —
dms., dlvd ... lb. .188 : —
Pineneedle oil, Siberian (see Abies Siberoca oil).
Pink root, bls. ... lb. 1.75 : —
Piperazine, anhyd., dms., c.l., frt. alld ... lb. 1.80 : —
dms., t.c.l., same basis ... lb. 1.85 : —
Piperazine citrate, 36%, dms., 1,000 lbs. or more, frt. alld ... lb. 1.15 : —
Piperazine dihydrochloride, 51½%, dms., 1,000 lbs. or more, frt. alld ... lb. 1.23 : —
Piperazine hexahydrate, 44%, dms., 1,000 lbs or more, frt. alld ... lb. .88 : —
dms., 200-900 lbs., frt. alld ... lb. .89 : —
Piperazine phosphate, 42%, dms., 1,000 lbs. or more, frt. alld ... lb. 1.06 : —
Piperidine, dist., 98% min., dms., c.l., t.l., frt. equald ... lb. 2.55 : —
Piperonyl butoxide, dms., dlvd. E ... lb. 4.50 - 5.05

**PITCHES**

**Pitch quotations are listed individually For example, prices on Pitch, soybean, may be found in the S's under Soybean pitch.**

Plaster of Paris (see Gypsum).
Platinum metal, works ... oz. 81.00 -85.00
Pleurisy root, bls. ... lb. .45 : .50
Podophyllum resin, NF, dms. ... lb. 12.50 : —
Poke root, bls. ... lb. .19 : .22
Polymyxin, bots., bulk., 50 billion units or more ... 1,000,000 units. .52 : —
bulk, bots., 25-50 billion units. ... 1,000,000 units. .54 : —
bulk, bots., 1-25 billion units. ... 1,000,000 units. .56 : —
Polyoxyethylene sorbitan monostearate, dms., 20,000-lb. lots, works ... lb. .42 : —
dms., 10,000-20,000-lb. lots, works. ... lb. .44 : —
dms., smaller lots, works ... lb. .47 : .49
Polyoxyethylene sorbitan tristearate, dms., 20,000-lb. lots, works ... lb. .42 : —
dms., 10,000-20,000-lb. lots, works ... lb. .44 : —
dms., smaller lots, works ... lb. .47 : .49
Pontianak copal gum, chips, bgs ... lb. .25 : —
Nubs, bgs. ... lb. .37 : .40
Poppy seed, Argentine, bgs. ... lb. No stocks.
Dutch, bgs. ... lb. .18 : —
Danish, bgs. ... lb. .16½- —
Polish, bgs. ... lb. .17½- —
Turkish, bgs. ... lb. .13½- —
Potash, caustic, liq., 45% basis, dms., c.l., works ... 100 lbs. 4.25 : —
dms., l.c.l., same basis ... 100 lbs. 5.25 : —
tanks, same basis ... 100 lbs. 3.70 : —
reg., flake, 88-92%, dms., c.l., same basis ... 100 lbs. 9.55 : —
reg., flake, 88-92%, dms., l.c.l., same basis ... 100 lbs. 11.05 : —
solid, 88-92%, dms., c.l., works. ... 100 lbs. 9.10 : —
dms., l.c.l., works ... 100 lbs. 10.60 : —
Potassium acetate, NF, 200-lb. dm., f.o.b. works, E ... lb. .31 : —
Potassium bicarbonate, USP, gran. powd., dms. ... dms lb. .22 : —
Potassium bichromate, gran., bgs., c.l., t.l., works ... lb. .24 : —
bgs., l.c.l., works ... lb. .18 : —
... lb. .18½- .19¾
Potassium bichromate in dms. ¾c. higher.
Potassium bitartrate, NF, gran., powd., 100-lb. bgs., c.l., frt. equald ... lb. .37 : —
100-lb. bgs., 5,000 lbs., 1 shipt., same basis ... lb. .38 : —
100-lb. bgs., smaller lots, same basis ... lb. .40 : —
Potassium borohydride, powd., dms., works ... lb. 16.00 -22.00
Pelletized potassium borohydride $1.25 per lb. higher in 1,000-lb. lots.
Potassium bromate, dms., 1,000-lb. lots or more, works ... lb. .50 : —
dms., smaller lots, works ... lb. .52 : .62
Potassium bromide, USP, gran., bbls., kgs ... lb. .39 : .40
Potassium carbonate, dom., NF, gran., bbls., dms ... lb. .20 : —
Dom., tech., powd., bbls., dms ... lb. .21 : .22
Dom., calcinated, bgs., c.l., works. ... 100 lbs. 8.50 : —
bgs., l.c.l., same basis ... 100 lbs. 9.55 : —
Dom., hydrated, 83-85%, bgs., c.l., works ... 100 lbs. 7.10 : —
bgs., l.c.l., works ... 100 lbs. 8.15 : —
Potassium chlorate, cryst., dms., c.l., works ... lb. .12¼- —
dms., l.c.l., works ... lb. .13½- .14½
Powd., dms., c.l., works ... lb. .12¾- —
dms., l.c.l., works ... lb. .14 : .15
Potassium chlorate, NF, cryst., dms., 2,000 lbs. or more, works ... lb. .12¼- —
NF, gran., 25-lb. metal dms ... lb. .16¾- —
NF, powd., dms., 2,000 lbs. or more, works ... lb. .17¼- —

Potassium chloride, indust., 99.9% KCL, bulk, c.l., works ... ton. 29.00 : —
bgs., c.l., works ... ton. 33.50 : —
99.3% KCL, bulk, c.l., works. ton. 28.00 : —
bgs., c.l., works ... lb. 32.50 : —
USP, cryst., dms. ... lb. .20 : .22
USP, gran., dms. ... lb. .21 : .23
USP, powd., dms. ... lb. .24 : .26
Potassium chloride agricultural (see Potassium muriate).
Potassium chromate, tech., dms., works ... lb. .50 - .51
Potassium citrate, NF, gran., 250-lb. dms., f.o.b. works E ... lb. .43 : —
powd., 250-lb dms., same basis. ... lb. .46 : —
Potassium cyanide, dms., 20,000-lb. lots or more, works ... lb. .42½- —
dms., 2,000-19,999-lb. lots, works. ... lb. .43 : —
dms., smaller lots, works ... lb. .44 : .44½
Potassium dichromate (see Potassium bichromate).
Potassium ferricyanide, dms., ton lots, works ... lb. .50 : —
dms., smaller lots, works ... lb. .65 : —
Potassium ferrocyanide, dms., ton lots ... lb. .24½- —
dms., smaller lots ... lb. .29 : —
Potassium fluoborate, fib. dms., c.l., works ... lb. .30 : —
fib. dms., l.c.l., works ... lb. .31 : —
Potassium fluoride, dms., works ... lb. .37 - .38
Potassium gluconate, 100-lb. dm., f.o.b. works E ... lb. 1.67 : —
Potassium guaiacol sulfonate, NF, dms ... lb. 2.10 - 2.30
Potassium hydroxide, tech. (see Potash caustic).
Potassium hydroxide, USP, pellets, 100-lb. dms., 1 to 100-dm. lots ... lb. .33½- .38
Potassium hypophosphite, NF, fib. dms., 1,000-lb. lots ... lb. 1.38 : —
Potassium iodide, USP, cryst., gran., or powd., 250-lb. dm., f.o.b. works ... lb. 1.40 : —
Potassium manure salt, min. 20% $K_2O$, bulk, c.l., works. unit-ton. .17 - .1765
Potassium metabisulfite, gran., dms., Powd., dms. ... lb. .16 : —
... lb. .27 : —
Potassium muriate, standard, bulk, c.l., works unit-ton. .34 - .36
bagged 60% minimum $K_2O$, same basis ton. 25.40 -26.60
Gran., bulk, c.l., works unit-ton. .35 - .37
bagged, 60% minimum $K_2O$, same basis ... ton. 26.00 -27.20

Inside prices apply to material contracted for prior to July 1, 1959.

Outside prices apply to material contracted for after that date but also for delivery during the current month.

Potassium nitrate, NF, cryst., bbls., 20-ton lots ... 100 lbs. 17.00 : —
bbls., smaller lots ... 100 lbs. 18.00 -19.00
gran., bgs., 20-ton lots ... 100 lbs. 9.50 : —
bgs., smaller lots ... 100 lbs. 11.00 -12.00
powd., bgs., 20-ton lots ... 100 lbs. 10.50 : —
bgs., smaller lots ... 100 lbs. 12.00 -13.00
Potassium oxalate, neutral, tech., fine gran., powd., 300-lb. dm., f.o.b. works E ... lb. .32 : —
Potassium pentaborate, gran., dms., c.l., works ... ton. 219.50 : —
dms., ton lots, ex whse ... ton. 311.00 : —
dms., smaller lots, ex whse ... ton. 316.00 : —
Powdered potassium pentaborate $10 per ton higher.
Potassium perchlorate, dms., c.l., dms., l.c.l., works ... lb. .18½- —
Potassium permanganate, coml., kgs., works ... lb. .19 : .20
USP, dms., works ... lb. .25 : .33
Potassium persulfate, dms., c.l., works ... lb. .20 : .25
dms., l.c.l., works ... lb. .17½- —
Potassium pyrophosphate, tetrabasic, dms., works ... lb. .18 : .21
Potassium prussiate red (see Potassium ferrocyanide).
Potassium prussiate yellow (see Potassium ferro-cyanide).
Potassium silicate, electrical grade, 30° Be, 1:2.0, dms., c.l., works ... 100 lbs. 6.50 : —
dms., l.c.l., 5 dm. lots or more, works ... 100 lbs. 7.25 : 7.65
tanks, works ... 100 lbs. 6.15 : —
Potassium silicate, electrical grade, 40.5° Be, 1:2.1, dms., c.l., works ... 100 lbs. 5.95 : —
dms., l.c.l., 5 dm. lots or more, works ... 100 lbs. 6.70 : —
tanks, works ... 100 lbs. 5.60 : —
Potassium silicate, glass grade, bgs., c.l., works ... 100 lbs. 17.30 -18.00
bgs., l.c.l., works ... 100 lbs. 17.80 : —
Soln., 29° Be, 1:2.5, dms., c.l., works ... 100 lbs. 4.95 : —
dms., l.c.l., 5-dm. lots or more, works ... 100 lbs. 5.70 : —
tanks, works ... 100 lbs. 4.60 : —
Potassium silicofluoride, bgs., works. ... lb. .09½- .10
Potassium silicofluoride in drums, 0.4c. per lb. higher.
Potassium stannate, dms., frt. alld. E ... lb. .789 - .861
Potassium sulfate, min. 50% $K_2O$, agricultural, bulk, c.l., works ... unit-ton. .62½- .64½

Inside price applies to tonnage contracted for prior to July 1, 1959.

Outside price applies to tonnage contracted for after that date but also for delivery during the current month.

Potassium sulfate, NF VII, cryst., dms., lb. .31 - .33
NF VII, gran., dms ... lb. .18½- —
NF VII, powd., dms ... lb. .16 - .17
Potassium sulfocyanate, NF, cryst., (see Potassium thiocyanate).
Potassium thiocyanate, NF, cryst., dms., works ... lb. .96 - .98
Tech., dms., works ... lb. .77 - .79
Potassium titanate, ctns., c.l., works. ... lb. .16¼- —
ctns., 5-ton lots, works ... lb. .16½- —
ctns., 1-ton lots or less, works ... lb. .16¾- —
Potassium-magnesium sulfate, basis 40% $K_2SO_4$ and 18% MgO, bulk, works, base price. ... ton. 13.45 : —
bulk, works, July forward ... ton. 14.00 : —
Potassium-sodium tartrate, NF, gran. or powd., 250-lb. dms., c.l., works E ... lb. .42½- —
250-lb. dms., 5,000-lb. lots, same basis ... lb. .43 : —
250-lb. dms., same basis ... lb. .43½- —
Potassium-titanium fluoride, fib. dms., works ... lb. .39 - .40
Potassium-zirconium flouride, fib. dms., c.l., works ... lb. .50 : —
fib. dms., l.c.l., works ... lb. .52½- .55
Pregnenolone, bots. ... gram. No prices.
Pregnenolone acetate, bots. ... gram. No prices.
Procaine hydrochloride, USP, antibiotic grade, dms., 2,000-lb. lots, frt. alld ... lb. 2.25 : —
USP, ampule grade, dms., 1,000-lb. lots, frt. alld ... lb. 2.40 : —
dms., 500 lbs ... lb. 2.45 : —
dms., 100 lbs ... lb. 2.50 : —
Progesterone, USP, bots ... gram. No prices.
Pregnenolone acetate, bots ... gram. No prices.
Propenyl guaethol, dms. ... lb. 24.30 -27.00
b-Propriolactone. dms., c.l., t.l., f.o.b. works ... lb. .89 : —
dms., l.c.l., t.t.l., same basis ... lb. .90 : —
tanks, same basis ... lb. .87 : —
Propionic acid, syn., pure, dms., c.l., works ... lb. .23¼- —
dms., l.c.l., works ... lb. .24¾- —
tanks, works ... lb. .20¾- —
n-Propyl acetate, dms., c.l., dlvd. ... lb. .14¾- —
dms., l.c.l., dlvd ... lb. .16¼- —
tanks, dlvd. ... lb. .12¼- —
n-Propyl alcohol, dms., c.l., dlvd ... lb. .14 : .15
dms., l.c.l., dlvd ... lb. .15½- .16½
tanks, dlvd. ... lb. .11½- .12½
n-Propyl gallate, dms., 100 to 2,000-lb. lots, works ... lb. 3.90 - 4.40
n-Propyl-p-hydroxbenzoate, USP, dms ... lb. 2.30 - 2.40
Propyl thiouracil, bots., 50 kilo lots or more ... kilo. 55.00 : —
bots., smaller lots ... kilo. 55.10 -55.30
n-Propylamine, dms., c.l., dlvd ... lb. 1.24 : —
dms., l.c.l., same basis ... lb. 1.255 : —
n-Propylene dichloride, consumers', dms., c.l., dlvd. E ... lb. .0845- —
dms., l.c.l., same basis ... lb. .0995- —
tanks, same basis ... lb. .07 : —
Propylene dichloride prices in West 1c. higher, same basis.
Propylene glycol, indust., dms., c.l., dlvd. E ... lb. .15 : —
dms., l.c.l., same basis ... lb. .16¾- —
tanks, same basis ... lb. .12½- —
USP, dms., c.l., dlvd. E ... lb. .17 : —
dms., l.c.l., same basis ... lb. .18¾- —
Propylene glycol methyl ether, dms., c.l., dlvd ... lb. .20 : —
dms., l.c.l., same basis ... lb. .21 : —
tanks, same basis ... lb. .18½- —
Propylene oxide, dms., c.l., dlvd. E. ... lb. .17 : —
dms., l.c.l., dlvd. E ... lb. .18½- —
tanks, dlvd. E ... lb. .14½- —
Psyllium seed, black, bgs ... lb. .30 : .35
Blonde, bgs. ... lb. .18 : .20
Husks, bgs. ... lb. .42 : .45
Pumice, dom., grd., coarse to fine, 0, ½, 1, 1½, 2, 3, bgs., ton lots ... lb. .03¾- .04¼
bgs., smalder lots ... lb. .03½- —
Imp., Italian, silk-screen, coarse, bgs, ton lots ... lb. .06½- —
fine, bgs., ton lots ... lb. .04 : —
sun dried, coarse, bgs ... ton. 60.00 : —
fine, bgs. ... ton. 60.00 -70.00
Pumpkin seed, bgs ... lb. .25 : .26
Pyrethrins, syn. (see Allethrin).
Pyrethrum flowers, fine grd., 0.9% pyrethrins, bgs., ton, works ... lb. .50 : —
Powd., 1.3% pyrethrins, bgs., ton, works ... lb. .71 : —
Pyrethrum liquid, 20/1 basis (2 grams pyrethrins per 100cc odorless base), dms., works. ... gal. 9.60 - 9.80
Pyrethrum liquid, 100/1 basis (10 grams pyrethrine per 100cc odorless base), dms., works ... gal. 45.90 -46.90
Pyrethrum oleoresin, dewaxed, 20%, dms., works ... lb. 11.00 -11.35
purif, 20%, dms., works ... lb. 11.00 -11.35
Pyridine, denat., dms., c.l., works and frt. equald ... gal. 2.55 : —
dms., l.c.l., same basis ... gal. 2.70 : —
Refd., 2°, non-ret. dms., c.l., same basis ... lb. .69½- —
dms., l.c.l., same basis ... lb. .70 : —
tanks, same basis ... lb. .65 : —
Pyridoxine hydrochloride, USP, 500-gram bots., dms., f.o.b. works ... kilo. 95.00 -100.00
Pyrites, Canadian, 48-50% S, mines, long-ton. 5.00 - 6.00
Pyrocatechol (see Catechol).
Pyrogallic acid, NF (see Pyrogallol).
Pyrogallic acid, tech., bbls., 100-lbs., f.o.b., works ... lb. 3.50 : —
Pyrogallol, NF, 100-lb. dms ... lb. 3.50 : —
Pyroxylin, USP, bots ... lb. 9.50 : —

## Q

Quassia chips ... lb. .10 : —
Quicksilver (see Mercury metal).
Quince seed, bgs ... lb. 1.30 - 1.40
Quinidine sulfate, USP, 1,000-oz. dm ... oz. .74½- —
Quinine, NF, 1,000-oz. dm ... oz. .3105- —
Quinine bisulfate, USP, 1,000-oz. dm. ... oz. .2330- —
Quinine hydrochloride, 1,000-oz. dm. ... oz. .3030- —
Quinine sulfate, USP, 1,000-oz. dm. ... oz. .2575- —
Quinoline dms., c.l., frt. equald ... lb. .50¾- —
dms., l.c.l., same basis ... lb. .51¼- —
tanks, same basis ... lb. .50 : —

## R

R salt paste, dms., frt. alld., 100% basis ... lb. .98 : —
Powd., frt. alld. 100% basis ... lb. 1.08 : —
Rapeseed oil, dms ... lb. .15 : .15½
tanks ... lb. .13 : —
Rare earth oxalate, NF, 45-50%, bgs, works ... lb. 1.15 : —
Rauwolfia serpentina root, powd., bbls., dms ... lb. 1.00 - 1.20
Red carmine, No. 40 (see Carmine).
Red oil (see Oleic acid).

**RED PIGMENTS**

**Red pigment quotations are listed individually. For example, prices on Red, lithol toner, may be found in the L's under Lithol red toner.**

Red precipitate (see Mercuric oxide, red).
Red toner, Lake C, alizanine, bbls., works ... lb. 1.25 : —
Reserpine, cryst., bots ... gram. 1.25 : —
Resorcinol, tech grade, dms., c.l., works, frt. equald ... lb. .77¼- —
dms., l.c.l., same basis ... lb. .78½- —
USP, powd., dms., works ... lb. 2.95 : —
Resorcinol monoacetate, NF, dms. ... lb. 2.50 : —
Rhatany root, bgs ... lb. .14 : .16
Rhodamine red toner, molybdated, PMA, kgs., works ... lb. 6.00 : —
Tungstated, PTMA, works, kgs ... lb. 6.60 : —
Rhodinol, 5-lb. cans ... lb. 42.00 -51.00
Synthetic ... lb. 14.00 -16.00
Rhubarb root, India, whole, bgs ... lb. .25 : —
powd., bgs. ... lb. .35 : —
Riboflavin, USP, fib. dms., kilo or more, dlvd kilo. 36.00 : —
tanks, same basis ... lb. .14¼- —
Riboflavin, USP, readily soluble, lots, dlvd kilo. 13.00 : —
Riboflavin, 5-phosphate-sodium, fib. dms., kilo or more, dlvd. kilo. 104.50 : —
Rice bran oil, clarified, dms., l.c.l. tanks, dlvd. E ... lb. .14 : .14¼
Ricinoleic acid (see Castor oil acids split). ... lb. .12 Nom.
Rochelle salt (see Potassium-sodium tartrate)
Roofing pitch (see Coaltar pitch roofing).
Rose oil, nat., Bulgarian, bots. ... lb. 1,152.00- —
Turkish, bots. ... lb. 1,152.00- —
Rosemary oil, Spanish, NF, cns., dms. ... lb. .97 : 1.40
Spanish, tech., cns., dms ... lb. .50 : 1.20
Rosin gum and wood (see Naval Stores in Protective Coatings market).
Rotenone, fib. dms., works. unit-lb. .12 : —
Resin, 25-45%, fib. dms., works. unit-lb. .12 : —
Rottenstone, bgs., 5-ton lots, ex-whse ... lb. .03¾- —
bgs., ton lots, same basis ... lb. .04¼- —
Rubber solvent, petroleum, 115°F-245°F b.r., tankcars, New Jersey and New York. gal. .19 : —
Group 3 ... gal. .13875- —
Houston, Texas ... gal. .155 : —
Rue oil, bots ... lb. 2.75 - 3.00
Rutin, NF, fib. dms., 10 kilo lots. ... kilo. 13.00 : —
fib. dms., 5 kilo lots ... kilo. 13.50 : —
fib. dms., 1 kilo ... kilo. 14.00 : —
Ryania, 100%, powd., bgs., c.l., works ... lb. .22 : —
bgs., l.c.l., same basis ... lb. .24 : —

## S

S acid, bbls., works ... lb. 3.25 : —
Sabadilla seed, activated, ground with lime, bbls lb. .42 : .44
Saccharin, calcium, fib. dms., 1,000-lb. lots, works lb. 2.50 : —
USP, gran., soluble, dms., 1,000-lb. lots, works ... lb. 1.40 : —
dms., smaller lots ... lb. 1.50 : —
USP, powd., soluble, insoluble, dms., 1,000-lb. lots ... lb. 1.45 : —
dms., smaller lots ... lb. 1.55 : —
Saccharin, USP, powd., insoluble, dms., 1,000-lb. lots ... lb. 1.43 : —
dms., smaller lots ... lb. 1.53 : —
Safflower oil, dms., New York ... lb. .1755- .18
tanks, Atl. Coast ... lb. .1555- —
Saffron, Mancha Superior, tins ... lb. 20.50 : —
Safrol, dms. ... lb. .65 : —
Sage, Dalmatian, bgs ... lb. .40 : —
Greek, cns. ... lb. .15 : —
Italian, cns. ... lb. .18 : —
Sage oil, clary, bots ... lb. 15.50 -18.00
Dalmatian, cns. ... lb. 2.85 - 3.25
Spanish, cns. ... lb. 1.25 - 1.75
Sal soda (see Soda sal).
Salicylaldehyde, dms., c.l., t.l., f.o.b., plant, frt. equald ... lb. 1.23 : —
dms., l.c.l., same basis ... lb. 1.25 : —
Salicylamide, 100-lb. dms ... lb. 1.05 : —
Salicylic acid, tech., fib. dms., c.l., t.l., dlvd ... lb. .40½- —
fib. dms., l.c.l., dlvd ... lb. .44¾- —
Salicylic acid, USP, cryst., 200-lb. fib. dms., 1,000 lbs. or more ... lb. .51¾- —
200-lb. fib. dms., less than 1,000 lbs ... lb. .54¾- —
100-lb. fib. dms., 1,000 lbs. or more ... lb. .53¾- —
100-lb. fib. dms., less than 1,000 lbs ... lb. .56¾- —
USP, powd., 100-lb. fib. dms., 1,000 lbs. or more lb. .58¾- —
100-lb. fib. dms., less than 1,000 lbs ... lb. .61¾- —
Salol, NF, gran., bbls., kgs ... lb. 1.20 : —
Powdered salol, 25c. per lb. higher.
Salt, rock, paper bgs., c.l. 100 lbs. 1.09 : —
Salt, table vacuum, common, fine, paper bgs., c.l 100 lbs. 1.34 : —
Saltcake, dom., bulk, works, 100% $Na_2SO_4$ basis ton. 28.00 : —
Saltpeter (see Potassium nitrate).
Sandalwood, E. Indian, chips, bgs., powd., fib. dms ... lb. .55 : .66
Sandalwood oil, cns ... lb. .75 : .76
Sarcosine, tech., tanks, f.o.b., works, frt. equald ... lb. 1.03 : —
Sardine oil, crude, tanks, Pac. coast. ... lb. No stocks.
Sassafras oil, artif., dms ... lb. .45 : —
Nat., dom., dms ... lb. 1.40 : —
Savory oil, cns ... lb. 4.75 : —
Schaeffer's salt, paste, dms., frt. alld. 100% basis ... lb. .85 : —
Powd., bgs., frt. alld., 100% basis. ... lb. .95 : —
Scopolamine hydrobromide, USP, bots ... oz. 13.00 : —
Sebacic acid, CP. bgs., c.l., works. ... lb. .69½- —
bgs., l.c.l., works ... lb. .71½- —
Purified, bgs., c.l., works ... lb. .65½- —
bgs., l.c.l., works ... lb. .67½- —
Seidlitz mixture, fib. dms., 5,000-lb. lots ... lb. .30½- —
fib. dms., smaller lots ... lb. .31 : .32
Selenium, powd., 99½%, dms., dlvd. ... lb. 7.00 : —
Senega root, bls ... lb. 3.00 : —
Senna leaves, Alexandria, whole and siftings ... lb. .20 : .22
half, bls ... lb. .16 : —
Tinnevelly, No. 1, bls ... lb. .22 : —
No. 2, bls ... lb. .18 : —
No. 3, bls ... lb. .14 : —
pods, bls. ... lb. .28 : —
powd., bbls., bxs ... lb. 17 : —
Serpentaria root, bls ... lb. 6.50 : —
Sesame oil, USP, dms ... lb. .38 : .39
Sesame seed, Colombian, bgs ... lb. .15½- —
Lebanese, hulled, bgs ... lb. .19 : —
Nicaraguan, hulled, bgs ... lb. .24 : —
nat., bgs. ... lb. .14 : —
Salvadorian, Nat., bgs ... lb. .16 : —
Shellac, bleached bonedry, bgs., 1,500-lb. lots ... lb. .46 : —
dms., l.c.l., works ... lb. .22 : .30¼
bbls., 1,500-lb. lots ... lb. .47 : —
kgs., 1,500-lb. lots ... lb. .48 : —
Bonedry shellacs prices for less than 1,500-lb. lots 1c. per lb. higher for all packages.
Shellac, bleached, refd., bgs., 1,500-lb. lots, works ... lb. .56 : —
bbls., 1,500-lb. lots ... lb. .57 : —
kgs., 1,500-lb. lots ... lb. .58 : —
Shellac, orange, lemon No. 1, bgs., 10-bg. lots ... lb. .37 : .39
lemon No. 2, bgs., 10-bg. lots. superfine, bgs., 10-bg. lots ... lb. .34 : .37
... lb. .32 : .34
Shellac in 1 to 10-bg. lots 1c. per lb. more.
Shingle stain oil, tar distillate, dms., c.l., works ... gal. .37 : —
tanks, works ... gal. .48 : —
Sienna pigment, burnt, paper bgs., c.l., works ... lb. .06½- .18¼
paper bgs., l.c.l., works ... lb. .06¾- .17¾
Raw, paper bgs., c.l., works ... lb. .06¾- .16¾
paper bgs., l.c.l., works ... lb. .07 : .17
Silica, amorph., dry-grd., 325 mesh, bgs., c.l., works ... ton. 25.00 : —
bgs., l.c.l., works, ex whse. ... ton. 45.00 -55.00
Silica, hard-quartz, 99½%, 325 mesh, bgs., c.l., works ... ton. 20.00 : —
bgs., l.c.l., works ... ton. 25.00 : —
99½%, 140 mesh, bgs., c.l., bgs., l.c.l., works ... ton. 15.00 : —
Silicon tetrachloride, tech., dms., c.l., works ... lb. .18 : —
tanks, works ... lb. .17 : —

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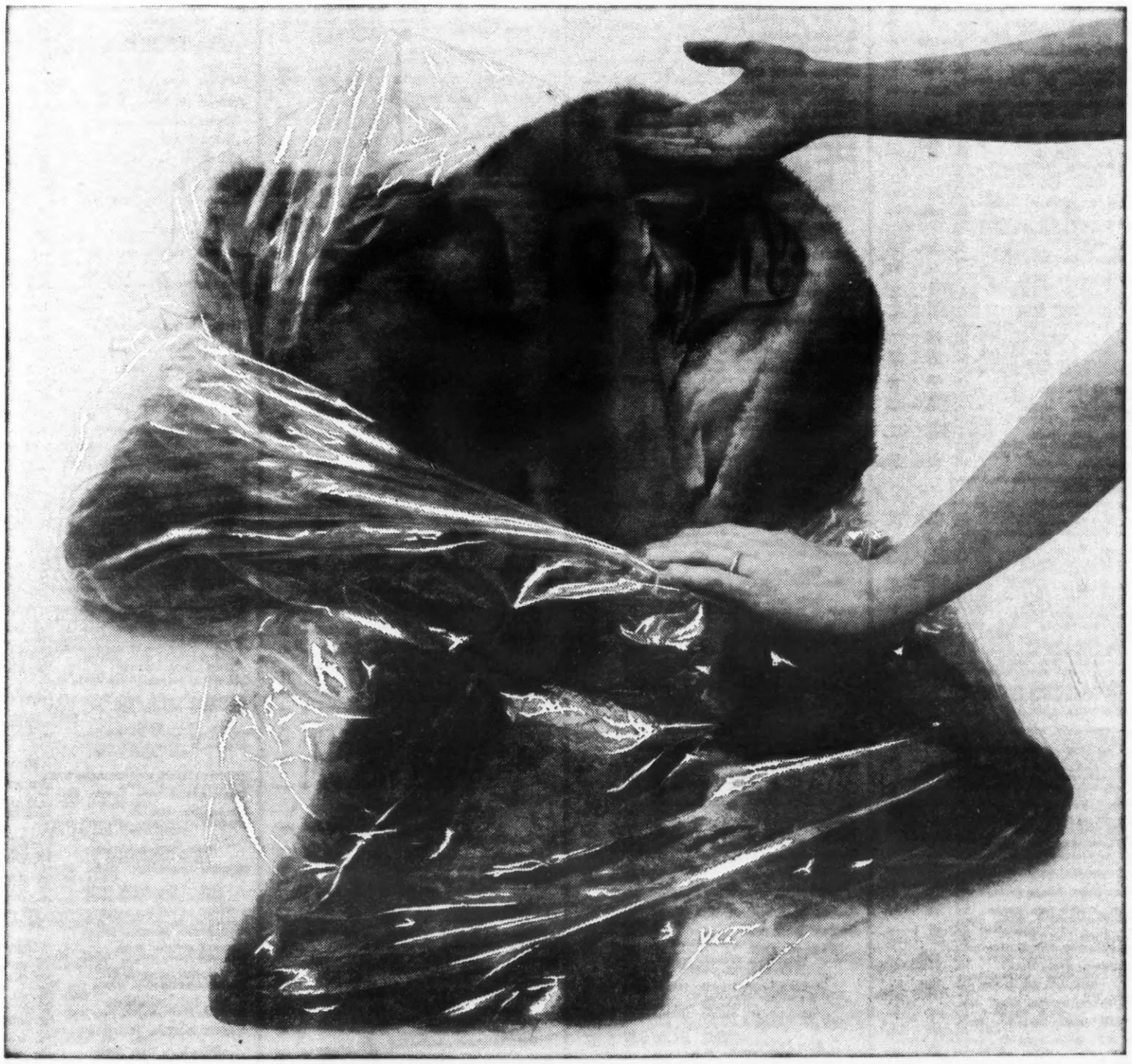

Silver bullion, ingots, cs Troy oz. .91⅜- —
Silver cyanide, bots., 1,000-oz. lots, oz. .94¾- —
bots., 500-oz. lots oz. .95¼- —
bots., 100-oz. lots oz. .96¼- —
Silver nitrate, CP, cryst., bots., 1,000 to 4,000 oz., f.o.b. works oz. .67¼ - —
bots. 250-500 oz., same basis. oz. 67¾ - —
USP granular silver nitrate 4c. per oz. higher.
Silver proteinate, mild, USP, 16-oz. bots. oz. 1.46 - —
Snakeroot oil, Canada, cns lb. 40.00 - 43.00
Soapbark, crushed, bls lb. .30 - .35
Powd., bls. lb. .35 - .40
Whole, bls. lb. .20 - .25
Soda ash, dense, 58%, paper bgs., c.l., works 100 lbs. 1.90 —
paper bgs., l.c.l., stock pts., 100 lbs. 3.00 - 4.77
bulk, c.l., works 100 lbs. 1.60 —
Light, 58%, paper bgs., c.l., works 100 lbs. 1.85 —
paper bgs., l.c.l., stock pts. 100 lbs. 3.95 - 4.72
bulk, c.l., works 100 lbs. 1.55 —
Soda, caustic, flake, 76%, dms., c.l., works, frt. equald 100 lbs. 5.20 - —
liq., 50%, sellers' tanks, works, dry basis 100 lbs. 2.90 - —
50%, rayon type, sellers' tanks, works, dry basis 100 lbs. 2.90 - 3.00
Soda, caustic, liq, 73%, sellers' tanks, works, dry basis. 100 lbs. 3.00 —
liq., 73%, rayon type, sellers' tanks, works, dry basis lb. 3.00 - 3.10
solid, 76%, dms., c.l., works, 100 lbs. 4.80 —
Soda, sal, conc., bgs., c.l., works. 100 lbs. 2.50 - —
bgs., smaller lots, works 100 lbs. 2.80 - —
Sodium acetate, anhyd., bgs., c.l., dlvd. E lb. .14½- —
NF, 60%, gran., dms., c.l., works, lb. .15½- —
dms., l.c.l., works lb. .17½- —
Sodium alginate, NF, white powd., dom., 300 lbs. or more lb. 1.02 - —
Sodium p-aminosalicylate, dms., 100-lb. lots or more, frt. adjusted lb. 1.90 - —
Sodium antimoniate, bgs., c.l., dlvd. E lb. .27½- —
bgs., l.c.l., dlvd. E lb. .29 - —
Sodium arsenate, 60% arsenic pentoxide, 200 lb. dm., less than ton lots, f.o.b. works lb. .24 - —
ton lots or more, same basis. lb. .23½- —
Sodium arsenite, 90% pink powder, 75% arsenious oxide, leaders, dms., ton lots or more, works lb. .17½- —
dms., less than ton lots, works lb. .18 - .19
Sodium ascorbate, dms., 25-50 kilo dms., f.o.b. works kilo. 10.00 - —
10-kilo dm., same basis kilo. 10.35 - —
5-kilo dm., same basis kilo. 10.75 - —
1-kilo bot., same basis kilo. 11.00 - —
Sodium benzoate, tech., dms., c.l., t.l., frt. alld lb. .35 - —
dms., l.c.l., same basis lb. .39 - —
USP, dms., c.l., t.l., frt. alld lb. .38 - —
dms., ton lots, same basis lb. .43 - —
dms., 1,000-lb. lots, same basis, lb. .45 - —
Sodium bicarbonate, USP, gran., bgs., c.l., works 100 lbs. 2.95 - —
bgs., l.c.l., works 100 lbs. 3.85 - —
USP, powd., bgs., c.l., works, 100 lbs. 2.55 - —
bgs., l.c.l. works 100 lbs. 3.45 - —
Sodium bichromate, gran., bgs., c.l., t.l., works lb. .13 - —
bgs., l.c.l., works lb. .13½- .14¾
Sodium bichromate in dms. ¾c. per lb. higher.
Sodium bifluoride, bbls., c.l., works, frt. equald lb. .19½- —
bbls., l.c.l., same basis lb. .2025- —
Sodium bisulfate, bulk, c.l., works, 100 lbs. 2.00 —
dms., c.l., frt. equald 100 lbs. 3.00 3.60
dms., l.c.l., frt equald 100 lbs. 3.50 4.10
Sodium bisulfite, annyd., bgs., c.l., works 100 lbs. 5.00 - —
bgs., l.c.l., works 100 lbs. 5.45 - —
Soln., 35° bbls., c.l., works. 100 lbs 1.70 - —
bbls., l.c.l., works 100 lbs. 2.20 - —
Sodium borate (see Borax)
Sodium borohydride, powd., dms., c.l., works lb. 19.90 —
dms., l.c.l., works lb. 33.00 - 40.00
Sodium borohydride, stabilized water soln., 12% NaBH, 100% basis, dms., works lb. 15.00 - —
Pelletized sodium borohydride $1 per lb. higher in 1,000-lb. lots.
Sodium bromide, USP, gran. dms., works lb. .40 - —
Sodium carbonate, cryst., monohydrated (see Soda, sal).
Sodium carbonate, monohydrated, bgs., c.l., works 100 lbs 3.10 - —
bgs., l.c.l., works 100 lbs. 3.50 - —
Sodium carboxymethyl cellulose (see CMC).
Sodium chlorate, cryst., 350-lb. dms., c.l., works lb. .09 - —
dms., l.c.l., works lb. .09½- .10½
Sodium chlorate in 100-lb. dms., only, ¼c. per lb. higher.
Sodium chloride, tech. (see Salt).
Sodium chloride, USP, gran., bgs. lb. .05 - —
Sodium chlorite, tech., dms., c.l., works lb. .58 - —
dms., 20-dm. lots or more, works. lb. .66 - —
dms., smaller lots, works lb. .70 - .73
Sodium chloroacetate, tech., dms., c.l., works lb. .27 - —
dms., l.c.l., works lb. .28 - —
Sodium chromate, anhyd., fib. dms., c.l., t.l., works lb. .14¾- —
fib. dms., l.c.l., works lb. .15¼- .16½
Sodium chromate tetrahydrate, bgs., c.l., t.l., works lb. .1015- —
bgs., l.c.l. lb. .1065- .1190
Sodium citrate anhyd., 200-lb. dm., f.o.b. works E lb. .62 - —
NF VIII, gran, bgs., c.l., same basis lb. .26 - —
USP XIV, gran., bgs., c.l., same basis lb. .29 - —
Sodium citrate, USP, powd. prices ½c. higher.
Sodium cyanate, dms., 1,000-lb. lots, works lb. .85 - —
dms., smaller lots, works lb. .90 - 1.10
Sodium cyanide, briquettes or gran., 97 percent min., dms., works, 20,000-lb. lots lb. .176 - —
dms., same basis, 5,000 to 19,999-lb. lots lb. .188 - —
dms., same basis, 1,000 to 4,900-lb. lots lb. .198 - —
Sodium cyclamate, 100-lb dm., f.o.b. works lb. 1.95 - —
Sodium diacetate, anhyd., 39-41% acetic acid, dms., c.l., works lb. .18 - —
250-lb. dms. l.c.l., works lb. 18¾- —
Tech., 33-35% acetic acid, dms., l.c.l., works lb. .15 - —
250-lb. dms., l.c.l., works lb. .15¾- —
Sodium dimethyl dithiocarbamate, 40% soln., dms., c.l., t.l. frt. alld., 100% basis lb 42 - —
dms., l.c.l., t.l.l., same basis lb. .47 - .52
tanks, same basis lb. .38 - —
Sodium ferrocyanide, bgs., 10-ton lots lb. .13½- —
bgs., smaller lots lb. .14¼- —
Sodium fluoride, white, 97%, fib. dms., c.l., works, frt. equald lb. 1390- —
fib. dms., l.c.l., works, frt. equald lb. 1465- —
Sodium formate, bgs., c.l., works. 100 lbs. 7.65 - —
bgs., l.c.l., ex whse 100 lbs. 8.65 - —
Sodium gentisate, 100-lb. fib. dms. lb. 5.50 - —
Sodium gluconate, refd., 250-lb. dm., f.o.b. works E lb .64 - —
Tech., bgs., c.l., t.l., same basis lb. .34 - —
Sodium hydride, 50% soln. in oil, dms., works lb. 1.25 - 2.50
25% soln. in oil, dms., 50 lbs. or less, f.o.b. shipping point. lb. 2.20 - —
dms., 50-99 lbs. same basis lb 1.77 - —
dms., 100-999 lbs., same basis lb 1.20 - —
dms., 1,000 lbs or more, same basis lb .95 - —
Sodium hydrosulfide (see Sodium sulfhydrate).
Sodium hydrosulfite, dms, c.l., frt. alld lb. 23½- —
dms., l.c.l., frt. alld. lb. 25¾- —
Sodium hydroxide, NF, pellets, 100-lb. dms., 1 to 100-dm. lots. lb .23½- .25
Sodium hydroxide, tech. (see Soda, caustic).
Sodium hypophosphite, NF, dms, 1,000-lb. lots lb. .99 - —
Sodium hyposulfite (see Sodium thiosulfate).
Sodium iodide, USP, 300-lb. dms., f.o.b. works lb. 1.98 - —
Sodium lauryl sulfate, dms., c.l., dlvd lb. .20½- —
dms., l.t.l., dlvd. lb. .21½- —
tanks, dlvd. lb. .19½- —
Sodium lignin sulfonate, bgs., c.l., works 100 lbs. 4.25 6.50
t.c.l., bgs., works 100 lbs. 4.40 7.00
Sodium metabisulfite (see Sodium bisulfite).
Sodium metaborate octahydrate, gran., bgs., c.l., works ton. 210.00 - —
bgs., ton lots, ex whse 100 lbs. 8.00 - —
bgs., smaller lots, ex whse. 100 lbs. 9.25 - 11.25
Tetrahydrate, bgs., c.l., works. ton. 210.00 - —
bgs., ton lots, ex whse 100 lbs. 13.93 - —
bgs., smaller lots, ex whse. 100 lbs. 15.18 - 17.18
Sodium, metallic, bricks, c.l., works. lb. .21 - —
Fused, 18,000-lb lots or more, works lb. .19½- —
tanks, works lb. .17 - —
Sodium metalinate, bbls., frt. alld. lb. .62 - —
Sodium metaphosphate, bgs., c.l., f.o.b. shipping pt 100 lbs. 11.10 - —
bgs., l.c.l., same basis 100 lbs. 11.85 - —
dms., c.l., same basis 100 lbs. 11.70 - —
dms., l.c.l., same basis 100 lbs. 12.45 - —
Sodium metasilicate, anhyd., bgs., c.l., works 100 lbs. 5.70 - —
bgs., 6,000-19,900 lb. lots, works. 100 lbs. 6.05 - —
dms., c.l., works 100 lbs. 6.20 - —
dms., l.c.l., works 100 lbs. 6.55 - —
Sodium metasilicate pentahydrate, bgs., c.l., works 100 lbs. 4.45 - —
bgs., l.c.l., works 100 lbs. 4.80 - 6.75
dms., l.c.l., works 100 lbs. 4.95 - —
dms., l.c.l., works 100 lbs. 5.30 - 7.25
Sodium molybdate, anhyd., dms., works, frt. equald lb. .92 - .99
Cryst., dms., works frt alld lb. 74 - 76
Sodium monoglutamate (see Monosodium glutamate).
Sodium monohydrate (see Sodium carbonate monohydrated)
Sodium naphthionate, bbls. lb. .72 - —
Sodium nitrate, dom., crude, bgs., c.l., works ton. 48.00 - —
bulk, c.l., works ton. 44.00 - —
Imp., crude, 100-lb. bgs., c.l., Atl., Gulf, Pac., whse ton. 48.00 - —
bulk, c.l., same basis ton. 44.00 - —
Sodium nitrite, USP, bbls., c.l., works, frt. equald 100 lbs 9.00 - —
bbls., l.c.l., same basis 100 lbs. 11.00 - —
Sodium orthosilicate, conc., dms., c.l., works 100 lbs. 6.70 - —
dms., l.c.l., works 100 lbs. 7.05 - 7.65
Hydrated, flake, bbls., c.l., works. 100 lbs. 5.65 - —
bbls., l.c.l., works 100 lbs. 7.60 - 7.90
Sodium oxalate, 88%, bgs., works. 100 lbs. 12.35 - —
99%, bgs., works 100 lbs. 15.40 - —
Sodium para-aminobenzoate (see Sodium p-aminobenzoate).
Sodium para-aminosalicylate (see Sodium p-aminosalicylate)
Sodium pentachlorophenate, briquets, dms., c.l., works, frt. equald lb. .26 - —
dms., l.c.l., same basis lb. .27½- .34
Pellets, dms., c.l., same basis lb. .26 - —
dms., c.l., same basis lb. .27½- .34
Powd., dms., c.l., same basis lb. .25 - —
dms., l.c.l., same basis lb. .26½- .33
Sodium pentabarbital, USP, dms., 100 lbs. or more lb. 6.00 - —
Sodium perborate, NF, tech., bgs., c.l., works lb. .18½- —
bgs., l.c.l., works lb. .19 - .21
Sodium peroxide, dms., c.l., t.l., dlvd. E. of Miss lb. .21½- —
dms., l.c.l., same basis lb. .22 - .22½
Sodium phenobarbital, USP, 100-lb. dms lb. 3.75 - —
Sodium phenosulfonate, USP, IX, gran., dms lb. .52 - .53
NF, powd., dms. lb. .55 - .56
Sodium phosphate, dibasic, anhyd., bgs., c.l., frt. equald 100 lbs. 7.95 - —
bgs., l.c.l., same basis 100 lbs. 8.35 - 9.40
Dibasic, cryst., bgs., c.l., t.l., frt. equald 100 lbs. 4.60 - —
bgs., l.c.l., frt. equald 100 lbs. 5.00 - 5.75
Dibasic, duohydrate, bgs., c.l., frt. equald 100 lbs. 7.60 - —
bgs., l.c.l., same basis 100 lbs. 8.10 - —
USP, dried, powd., bgs., dms., works lb. .19 - .20½
Monobasic, anhyd., bgs., c.l., frt. equald 100 lbs 9.00 - —
bgs., l.c.l., same basis 100 lbs 9.40 - 10.00
Tribasic, anhyd., bgs., c.l., frt. equald 100 lbs. 9.00 - —
bgs., l.c.l., frt. equald 100 lbs. 9.45 - 10.05
Sodium phosphate in dms. 60c. to 80c. higher than bgs.
Sodium picramate, tech., paste, dms., f.o.b. works, frt. equald lb. .90 - —
Sodium propionate, any quantity, dms., dlvd. E. of Rockies, lb. .34½- —
Prices W. of Rockies 3c. per lb. more.
Sodium prussiate, yellow (see Sodium ferrocyanide).
Sodium pyrophosphate acid, bgs., c.l., works, frt. equald, 100 lbs. 11.10 - —
bgs., l.c.l., same basis 100 lbs. 11.85 - 12.35
Sodium pyrophosphate, ferric, dms., c.l., t.l., works lb. .36 - —
dms., l.c.l., works lb. .37 - .39
Tetrabasic, anhyd., bgs., c.l., works, frt. equald 100 lbs. 7.81 - —
bgs., l.c.l. same basis 100 lbs. 9.21 - 9.71
Sodium salicylate, USP, dms., 1,000-lbs. or more lb. .78½- —
dms., less than 1,000 lbs., dms. lb. .81½- —
Sodium sesquicarbonate, bgs., c.l., works 100 lbs. 2.35 —
Sodium sesquicarbonate, bgs., l.c.l., dlvd. zone 1 100 lbs. 4.10 4.35
dlvd. zone 2 100 lbs 4.35 4.60
dlvd. zone 3 100 lbs 4.75 4.90
dlvd. zone 4 100 lbs 5.35 5.60
Sales zones are (1) Atl. states E. of Miss., R and N of south bound of Ky. and Va.; Ala., La., and Miss. south of 31°; Tex. E. of 100°; S of 31° Fla.; also Me., N. H. and Vt. in which there are special county zones: Davenport, Ia., and St Louis; (2) Ark. E. of 98° Ga.; Iowa (except Davenport) Minn., Mo. (except St. Louis) Neb. E. of 98° N. C., S. C., Tenn. and Tex. N. of 31° and E. of 100° (except Wichita Falls); also Ala., La. and Miss. No of 31°; (3) Ark W. of 96°, Kan., Neb W. of 98° N. D., Okla., S. D., Tex., W of 100° (including Wichita Falls, excluding El Paso); (4) Ariz., Colo., Idaho, Mont., Nev., N. M., Utah, Wyo. and El Paso, Tex.
Sodium sesquisilicate, anhyd., bgs., c.l., t.l., works 100 lbs. 5.70 - —
dms., c.l., t.l., works 100 lbs. 6.20 - —
Sodium sesquisilicate, hydrated, bgs., c.l., works 100 lbs. 5.00 - —
bgs., 6,000-19,900 lb. lots, works 100 lbs. 5.35 - —
dms., c.l., works 100 lbs. 5.50 - —
dms., 6,000-19,900 lb. lots, works. 100 lbs. 5.85 - —
Sodium silicate, liq., 40° Be., 1:3.2, turbid, dms., c.l., works, 100 lbs. 1.65 - —
dms., l.c.l., works 100 lbs. 1.90 - 2.40
tanks, works 100 lbs. 1.20 —
47° Be., 1:2.9.9, turbid, dms., c.l., works 100 lbs. 2.25 —
dms., l.c.l., works 100 lbs. 2.60 - 3.45
tanks, works 100 lbs. 1.90 —
52° Be. 1:2.4, turbid, dms., c.l., works 100 lbs. 2.65 —
dms., l.c.l., works 100 lbs. 3.00 - 3.50
tanks, works 100 lbs. 2.30 - —
Solid, 1.3.2, bgs., works ton. 67.50 - —
Sodium silicofluoride, bgs., c.l., works lb. .065 - —
bgs., l.c.l., works lb. .725- —
Sodium silicofluoride in dms., 0.4c. per lb. higher
Sodium stannate, dms., works, frt. alld. E lb. .648 - .707
Sodium sulfa drugs (see Sulfa name).
Sodium sulfanilate, bbls., works lb. .22 —
Sodium sulfate, NF VII, dried, powd., dms lb. .22½- —
Tech., anhyd., bgs., c.l., dlvd. E. ton. 54.00 - —
Tech., detergent, rayon grade, bgs., c.l., works ton. 36.00 - —
bulk, c.l., works ton. 32.00 - —
USP, cryst., fib. dms. lb. .17½- .18
Sodium sulfhydrate, flake, 70-72%, dms., c.l., works, frt. equald lb. .07¼- —
dms., l.c.l., same basis lb. .08¼- —
Liq. 40-44%, tanks, works, 100% basis ton. 130.00 —
Sodium sulfide, flake, dms., c.l., works, E., frt. equald lb. .06 - —
dms., l.c.l., same basis lb. .07 - —
Fused, bbls., c.l., works, E., frt. equald lb. .05½- —
bbls., l.c.l., same basis lb. .06½- —
Sodium sulfite, anhyd., powd., bgs., c.l., works 100 lbs. 7.55 - —
bgs., l.c.l., same basis 100 lbs. 7.95 - —
Anhyd., tech., bgs., c.l., works. 100 lbs. 3.50 - —
bgs., t.l., same basis 100 lbs. 4.00 - —
Sodium sulfocyanide, CP (see Sodium thiocyanate).
Sodium tetraborate (see Borax).
Sodium tetrasulfide, liq., 40%, dms., c.l., works, frt. equald lb. .04½- —
dms., l.c.l. same basis lb. .05½- —
Sodium thiocyanate, CP, dms. lb. .55 - .65
Tech., anhyd., dms., 1 ton lots or more, works lb. .317 - —
dms., less than ton lots, works lb. .337 - —
Sodium thiosulfate, NF, cryst., bbls. lb. .13½- —
Tech., anhyd., 100-lb. bgs., c.l., t.l., frt. equald 100 lbs. 7.75 - —
100-lb. bgs., l.c.l., t.l.l., frt. equald 100 lbs. 8.15 - —
Sodium thiosulfate, tech., anhyd., photo grade, 64-lb. bgs., c.l., t.l., frt. equald lb. .0775- —
64-lb. bgs., l.c.l., t.l.l., frt. equald lb. .0815- —
Tech., pentahydrate, photo grade, 100-lb bgs., c.l., t.l., frt. equald 100 lbs. 4.95 - —
Sodium thiosulfate, tech., pentahydrate, photo grade, 100-lb. bgs., l.c.l., t.l.l., frt. equald 100 lbs. 5.20 - —
Sodium titanate, ctns., c.l., works. lb. .14¼- —
ctns., 5-ton lots, works lb. .14½- —
ctns., 1-ton lots or less, works lb. .14¾- —
Sodium trichloroacetate, 90%, 100-lb. dms., c.l., frt. alld. E. lb. .35 - —
50-lb. dms., c.l., frt. alld. E lb. .35½- —
10-lb. cns., c.l., frt. alld. E lb. .42 - —
Prices on Sodium trichloroacetate W. of the Rockies are 1¾c. per pound higher.
Sodium tripolyphosphate, bgs., c.l., works, frt. equald 100 lbs. 8.16 - —
bgs., l.c.l., same basis 100 lbs. 8.56 - 9.06
Sodium trisilicate, powd., 1:3.2, bgs., c.l., works 100 lbs. 8.95 - —
bgs., l.c.l., works 100 lbs. 9.70 - 13.13
dms., c.l., works 100 lbs. 9.45 - —
dms., l.c.l., works 100 lbs. 10.20 - 10.60
Sodium tungstate, tech., kgs., dlvd. E lb. 1.32 - —
Sodium-ammonium phosphate, purif., cryst., dms., works lb. .52 - —
Sodium-carboxymethyl cellulose (see CMC).
Sodium-cinchophen (see Cinchophen-sodium).
Sodium - formaldehyde sulfoxylate, dms., c.l., dlvd lb. .21 - —
dms., l.c.l., same basis lb. .21½- —
Sodium-zirconyl sulfate, fib. dms., 1,000-lb. lots or more works lb. .28 - —
fib. dms., smaller lots, same basis lb. .30 - —
Solvent naphtha, coaltar, high-flash, tanks, frt. equald gal. .30 - .35½
Solvent naphtha, petroleum, straight aromatic, 310°-360° F. b.r., 14°-16° C. m.a.p., tankcars, New Jersey and New York gal. .29 - —
Houston, Texas gal. .29 - —
355°-420° F. b.r., 17°-18° C. m.a.p., tankcars, New Jersey and New York. gal. .30 - —
Houston, Texas gal. .30 - —
Solvent naphtha, petroleum, partial aromatic, 211°-265° F. b.r., 31° C. m.a.p., tankcars, New Jersey and New York gal. .235 - —
286°-340° F. b.r., 22° C. m.a.p., tankcars, New Jersey and New York gal. .275 - —
319°-380° F. b.r., 27° C. m.a.p., tankcars, New Jersey and New York gal. .27 - —
322°-395° F. b.r., 28° C. m.a.p., tankcars, New Jersey and New York gal. .28 - —
Sorbitol, powd., dms., c.l., works lb. .38½- —
Sorbitan monostearate, fib dms., 20,000-lb. lots, works lb. .33½- —
fib. dms., 10,000 to 20,000-lb. lots, works lb. .35½- —
fib. dms., smaller lots, works lb. .38½- .40½
Sorbitan tristearate, fib. dms., 20,000-lb. lots, works lb. .34 - —
fib. dms., 10,000 to 20,000-lb. lots, works lb. .36 - —
fib. dms., smaller lots, works lb. .39 - .41
Sorbitol, NF, reg., 70% aqueous, dms., c.l., works lb. .18 - —
dms., l.c.l., works lb. .19 - —
tanks, works lb. .16¼- —
cryst., resin grade, pellets, dms., c.l., works lb. .23 - —
dms., 1 to 5-ton lots, works. lb .25 - .26
dms., 10,000 to 20,000 lb. lots, works lb. .40½- —
Sorbitol, soln., comL aqueous, dms., c.l., works lb. .26 - —
dms., l.c.l., works lb. .27 - —
Soya protein, chemically isolated, old process, bgs., c.l., works. lb. .23 - —
bgs., l.c.l., works lb. .23¼- .23¼
Chemically isolated, new process, bgs., c.l., works lb. .20 —
bgs., l.c.l., works lb. .20¼- .29¼
Soybean meal, 44% bulk, unrestricted, Decatur ton. 54.00 - —
Soybean oil, crude, tanks, Decatur. lb. .0905- —
Foots, soapstock, acid 95%, tanks, N. Y. lb. .05 —
Refd., alkali, dms. lb. .1331- .1350
tanks lb. .1131- —
Clarified, dms. lb. .1281- .1300
tanks lb. .1081- —
Salad, dms. lb. .1305- .1330
tanks lb. .1105- —
Soybean oil acids, dbl. dist., dms., lb. .17 .19½
tanks lb. .14½- —
S. D., dms. lb. .15¾- .18¼
tanks lb. .13¼- —
Sparteine sulfate, cns., 100 oz. or more oz. .80 - —
Spearmint leaves, dom., bls lb. 75 - —
Spearmint oil, NF, dms. lb. 3.75 - 4.50
Sperm oil, bleached, winter, 45° dms lb. .1575- .1675
tanks lb. .1375- —
Nat., winter, 45°, dms lb. .1475- .1575
tanks lb. .1275- —
Spermaceti wax, blocks, cs lb. .31 - .33
Cakes, cs. lb. .32 - .34
Spruce oil, cns., dms. lb. 2.10 - 3.55
Squill, white, bls. lb. .16 - .18
Powd., bbls., bxs. lb. .17 - .20
St. John's bread, edible, bls. lb. .17 - —
Stannic chloride, anhyd., dms., works lb. .817 - .839
Stannic oxide, dms., dlvd lb. 1.10 - 1.11
Stannous chloride, dihydrate, crystals, works lb. 1.013 - 1.268
Hydrous, cryst., dms., works lb. .87½- .88¼
Stannous sulfate, dms., works lb. 1.067 - 1.087
Star root (see Helonias root)
Stargrass root (see Aletris root.)
Stavesacre seed, bgs. lb. .60 - .61
Stearic acid, dbl., pressed bgs lb. .15¾- .18¼
Single-pressed, bgs., lb. .15¼- .17¾
Triple-pressed, bgs. lb. .17½- .20
Stearine, oleo (see Oleostearine.)
Stoddard solvent, petroleum, tanks, east coast, New Jersey, New York gal. .18 - —
tanks, Houston gal. .1475- —
tanks, group 3 gal. 12875- —
Stramonium leaves, bgs. lb. .13 - —
Streptomycin sulfate, bulk, gram. .035 - .036
Strontium bromide, NF, cryst., 100-lb. dm., f.o.b. E lb. .92 - —
Strontium carbonate, pure, dms., 5-ton lots or more, works. lb. .35 - —
dms., 1-ton lots, works lb. .37 - —
Tech., dms., works lb. .19 - —
Strontium chromate, fib. dms., dlvd. lb. .48 - —
Strontium iodide, jars, 25-lb lots lb. 3.57 - —
Strontium nitrate, bgs., c.l., works. 100 lbs. 11.00 - —
bgs., l.c.l., works 100 lbs. 12.00 - —
Strontium salicylate, NF, dms lb. 1.88 - —
Strontium sulfate, air floated, 90%, 325 mesh, bgs., works. ton. 56.70 - 66.15
Strophanthin G (see Quabain, USP).
Strophanthin K bots. oz. 25.00 - 25.50
Strophanthus seed, Kombi, biologically tested, bgs lb. 3.50 - 3.75
Styrax gum, USP, cs. lb. 4.50 - 5.50
Styrene monomer, polymer grade, 99.6%, dms., c.l., frt. alld. lb. .17 - —
dms., l.c.l., same basis lb. .19 - —
tanks, same basis lb. .14½- —
Styrene monomer, tech., 99.2%, dms., c.l lb. .1501- —
dms., l.c.l., same basis lb. .1701- —
tanks, bulk, same basis lb. .1251- —
Above prices are escalated for each calendar quarter on the basis of cost of benzene and petroleum refining labor.
Styrolyl acetate, bots. lb. 1.10 - —
Succinic acid, purif., cryst., dms., t.l., frt. alld lb. .62 - —
dms., l.t.l., same basis lb. .63 - .75
Succinic anhydride, dms., c.l., t.l., dlvd lb. .51 - —
dms., l.c.l., same basis lb. .52 - —
Sucrose, refd., white, bgs., refy E. lb. .0970- —
Sucrose acetate, isobutyrate, 90%, dms., t.l., dlvd lb. .33½- —
dms., l.t.l., same basis lb. .35 - —
tanks, same basis lb. .31 - —
100%, t.l., dms., dlvd lb. .35½- —
l.t.l., dms., same basis lb. .37 - —
Sucrose octa-acetate, denaturing grade, 100-200-lb. lots, bgs., l.c.l., works lb. 1.00 - —
Sugar (see Sucrose)
Sugar cane, wax, dom., refd., slabs, 80-lb. ctns., works lb. .60 - .65
80-lb ctns., spot lb. .65 - .75
Sulfabenzamide, dms. kilo. 8.80 - 9.90
Sulfabenzamide-sodium, dms. kilo. 9.00 - 10.10
Sulfacetamide, USP, fib. dms kilo. 6.61 - 6.83
Sulfacetamide-sodium, USP, fib. dms kilo. 8.15 - 9.25

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| Sulfadiazine, USP, microcrystals, dms | kilo. | 23.35 | -24.45 |
| USP, powd., dms. | kilo. | 22.60 | -23.70 |
| Sulfadiazine-sodium, USP, dms. | kilo. | 24.80 | -25.90 |
| Sulfaguanidine, NF X, dms. | kilo. | 5.50 | - 6.60 |
| Sulfamerazine-sodium, USP, powd., dms | kilo. | 24.80 | 25.90 |
| Sulfamethazine, USP XV, microcrystals, dms | kilo. | 19.65 | -20.75 |
| USP XV, powd., dms. | kilo. | 18.75 | -19.85 |
| Sulfamic acid, cryst., dms., c.l., t.l., works | 100 lbs. | 16.00 | - — |
| dms., l.c.l., l.t.l., works | 100 lbs. | 17.50 | 18.50 |
| Gran., dms., c.l., t.l., works | 100 lbs. | 14.75 | - — |
| dms., l.c.l., l.t.l., works | 100 lbs. | 16.25 | -17.25 |
| Sulfanilamide, NF, reg., 1,000 lb., frt. equald | lb. | 1.50 | - — |
| NF, fib. dm., frt. equald | lb. | 1.55 | - — |
| Sulfanilamide quinoxaline, veterinary, dms | kilo. | 16.28 | - — |
| Sulfanilic acid, tech., dms., c.l., frt. alld | lb. | .21 | - — |
| dms., l.c.l., frt. alld | lb. | .23 | - — |
| Sulfapyridine, USP XV, powd., bots., tins | kilo. | 15.45 | -16.55 |
| Sulfapyridine-sodium, monohydrate, dms | kilo. | 16.53 | -17.65 |
| Sulfathiazole, NF X, microcrystals, dms | kilo. | 6.25 | - 6.90 |
| NF X, powd., dms. | kilo. | 5.50 | - 6.15 |
| Sulfathiazole-sodium, NF X, dms., 1,000-lb. lots or more | lb. | 2.35 | - — |
| Sulfur, coml., flour, bgs., mines, 100 lbs. | | 2.35 | - — |
| bbls., mines | 100 lbs. | 3.30 | - — |
| lump, bgs., mines | 100 lbs. | 2.25 | - — |
| bbls., mines | 100 lbs. | 2.80 | - — |
| Sulfur, crude, dom., bright, bulk, f.o.b. cars, mines | long-ton. | 23.50 | - — |
| export, f.o.b. vessels, Gulf ports, | long-ton. | 25.00 | - — |
| US and Canada, f.o.b. vessels Gulf ports | long-ton. | 25.00 | - — |
| Domestic dark sulfur prices are $1 per long-ton lower. | | | |
| Sulfur, crude, imp., Mexican, bulk, filtered, f.o.b., vessel, Coatzacoalcos | long-ton. | 24.00 | - — |
| Mexican dark sulfur price is $1 per long-ton lower. | | | |
| Sulfur, refd., flowers, NF, bgs., mines | 100 lbs. | 5.65 | - — |
| bbls., mines | 100 lbs. | 7.00 | - — |
| flour, light, bgs., mines | 100 lbs. | 5.25 | - — |
| bbls., mines | 100 lbs. | 6.25 | - — |
| lump, bgs., mines | 100 lbs. | 4.95 | - — |
| rolls, bgs., mines | 100 lbs. | 5.50 | - — |
| bbls., mines | 100 lbs. | 6.25 | - — |
| salt block, bgs., mines | 100 lbs. | 4.65 | - — |
| virgin block, bbls., mines | 100 lbs. | 4.70 | - — |
| Sulfur, rubbermakers, coml., reg., bgs., mines | 100 lbs. | 2.45 | - — |
| bbls., mines | 100 lbs. | 3.70 | - — |
| 98-100%, passing through 325 mesh, bgs., mines | 100 lbs. | 2.53 | - — |
| bbls., mines | 100 lbs. | 3.80 | - — |
| refd., bgs., mines | 100 lbs. | 4.90 | - — |
| bbls., mines | 100 lbs. | 6.05 | - — |
| treated, 2.5% mineral oil, bgs., mines | 100 lbs. | 2.75 | - — |
| bbls., mines | 100 lbs. | 4.00 | - — |
| Sulfur dichloride, ret. dms., c.l., works, frt. equald | lb. | .05¼- | — |
| ret. dms., l.c.l., same basis | lb. | .06¼- | — |
| tanks, same basis | lb. | .04½- | — |
| Sulfur dioxide, liq., coml., cyls., works, frt. equald | lb. | .10 - | .12 |
| multi-unit cars, works | lb. | .0535- | — |
| tanks, works | lb. | .045 - | — |
| Sulfur dioxide, refrigeration, cyls., dlvd | lb. | .33 - | — |
| Sulfur monochloride, 55-gal. non-ret. dms., c.l., frt. equald | lb. | .05¼- | — |
| dms., l.c.l., same basis | lb. | .06¼- | — |
| tanks, same basis | lb. | .04½- | — |
| Sulfuric acid, 60° Be, cbys., c.l., works | 100 lbs. | 2.00 | - — |
| cbys., l.c.l., works | 100 lbs. | 2.30 | - — |
| tanks, works | ton. | 18.60 | - — |
| 66° Be, cbys., c.l., works | 100 lbs. | 2.25 | - — |
| cbys., l.c.l., works | 100 lbs. | 2.55 | - 3.35 |
| tanks, works | ton. | 22.35 | - — |
| 96%, tanks, works | ton. | 23.50 | - — |
| 99%, tanks, works | ton. | 23.70 | - — |
| 100%, tanks, works | ton. | 23.95 | - — |
| CP, NF, consumers' cbys., c.l., frt. equald | lb. | .12¾- | — |
| Sulfuric acid, CP, NF, consumers', cbys., l.c.l., same basis, | lb. | .14¼- | .14¾ |
| 5-pt. bots., extra, cs., c.l., works, frt. alld | lb. | .16¼- | — |
| 5-pt. bots., extra, cs., l.c.l., same basis | lb. | .17¾- | .18¼ |
| Sulfuric acid, fuming (oleum), 20%, tanks, works | ton. | 25.00 | - — |
| 40%, tanks, works | ton. | 29.00 | - — |
| 65%, tanks works | ton. | 39.50 | - — |
| Superphosphate, run-of-pile under 22% a.p.a., pulv., bulk, c.l., Baltimore | unit-ton. | .90 | - .93 |
| bulk, c.l., Carteret, N. J. | unit-ton. | .90 | - .93 |
| bulk, f.o.b. vessel at Fla. | unit-ton. | 1.03 | - — |
| Superphosphate, triple, 48% or more a.p.a., pulv., bulk, c.l., East Tampa, Fla., | unit-ton. | 1.00 | - — |
| Sweet birch oil, USP, northern, cns. | lb. | 4.00 | - 9.50 |
| USP, southern, cns. | lb. | 2.00 | - 3.05 |

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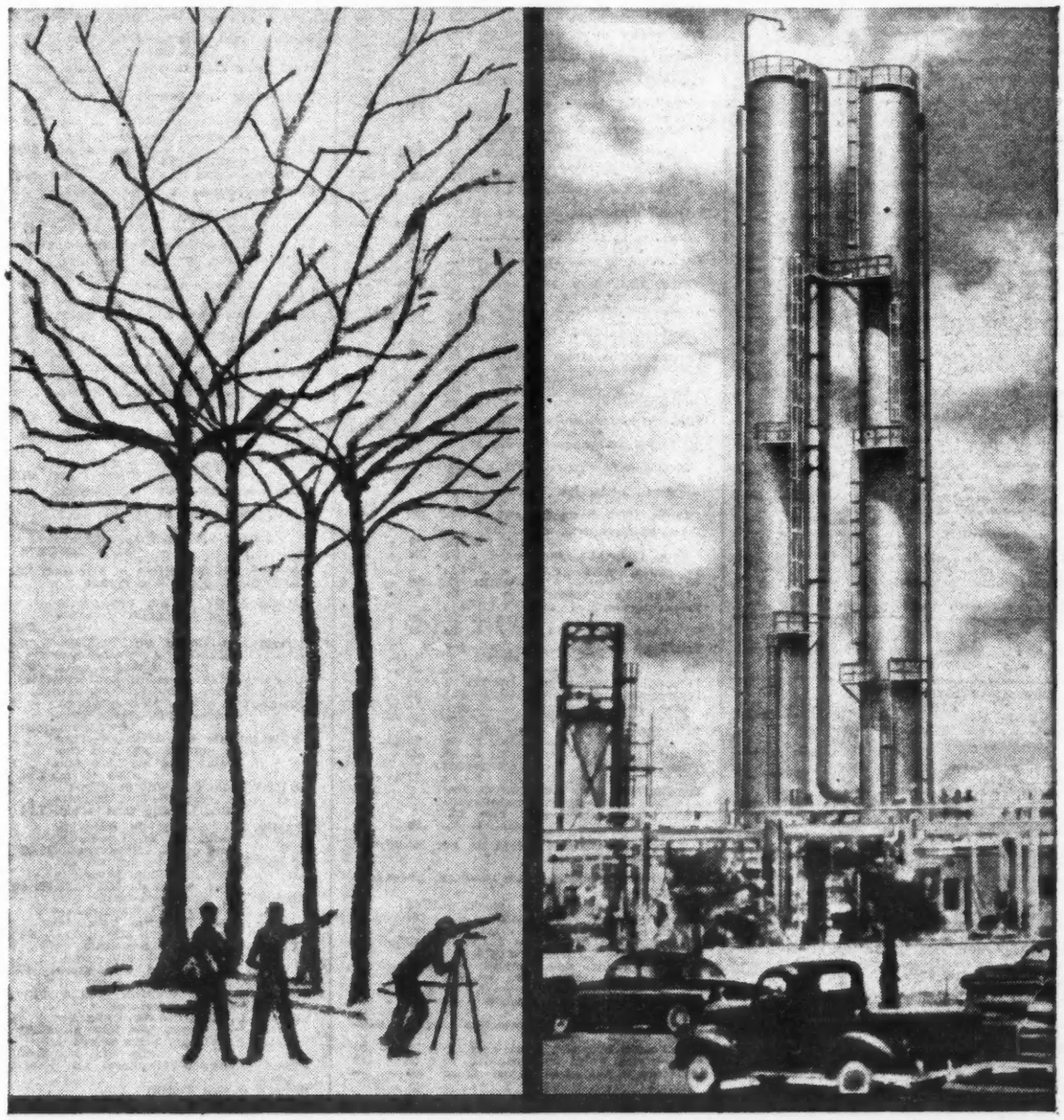
| 2,4,5-T, dms., c.l., works, frt. equald. | lb. | 1.18 | - — |
| dms., l.c.l., same basis | lb. | 1.25 | - — |
| 2,4,5-T, isopropyl ester, dms., c.l., works, frt. equald | lb. | 1.24 | - — |
| dms., l.c.l., works | lb. | 1.29 | - — |
| Talc, dom., fibrous, grd., bgs., c.l., works, New York | ton. | 28.00 | - — |
| bgs., l.c.l., works | ton. | 31.00 | -36.00 |
| fibrous, 99.5%, 325 mesh, bgs., c.l., works, New York | ton. | 31.00 | - — |
| bgs., l.c.l., works | ton. | 34.00 | - — |
| Talc, dom., fibrous, 99.95%, 400 mesh, micronized, bgs., c.l. works | ton. | 38.00 | - — |
| 625 mesh, micronized, bgs., c.l., works | ton. | 80.00 | - — |
| ord., Calif., grd., bgs., c.l., works | ton. | 34.00 | -39.50 |
| Vermont, off-color, grd., bgs., c.l., works | ton. | 19.40 | - — |
| bgs., l.c.l., works | ton. | 37.00 | - — |
| Imp., Canadian, grd., bgs., c.l., mines | ton. | 20.00 | -35.00 |
| Tall oil, crude, dms., c.l., works | lb. | .04¼- | .04½ |
| tanks, works | lb. | .02⅞- | .03 |
| Dist., depending on grade, dms., c.l., works | lb. | .06½- | .07½ |
| dms., l.c.l., works | lb. | .07 - | .08 |
| tanks, works | lb. | .04½- | .05½ |
| Tall oil, refd., depending upon grade, dms., c.l., works | lb. | .07¼- | .09 |
| dms., l.c.l., works | lb. | .07½- | .09½ |
| tanks, works | lb. | .05¼- | .06¼ |
| Tall oil acids, dms., c.l., works | lb. | .07 - | .10 |
| dms., l.c.l. | lb. | .07½- | .10½ |
| tanks, works | lb. | .05 - | .08 |
| Tallow, edible, tanks, dlvd | lb. | .09¼- | — |
| Inedible, fancy, bleachable, tanks, | lb. | .05¾- | — |
| fancy, guaranteed, bulk, f.o.b. steamer | lb. | .06¼ | Nom. |
| dms., f.a.s. | lb. | .07¼ | Nom. |
| tanks, dlvd. | lb. | .06 - | — |
| No. 1, tanks, dlvd | lb. | .04⅞- | — |
| Prime, tanks, dlvd | lb. | .05½- | — |
| Special tanks, dlvd. | lb. | .05¼- | — |
| Sulfonated, 25%, bbls., l.c.l. | lb. | .08½- | .08¾ |
| 50%, bbls., l.c.l. | lb. | .10½- | .11 |
| Tallow acids, dist., dms. | lb. | .13¼- | .15¾ |
| tanks | lb. | .10¾- | — |
| Hydrogenated, dms. | lb. | .14¾- | .17¼ |
| Tallow oil, acidless, dms., c.l. | lb. | .13½- | — |
| dms., l.c.l. | lb. | .14½- | .15½ |
| Tangerine oil, Florida, dms. | lb. | 4.75 | - — |
| Tankage, animal, feeding, 9-11% ammonia, New York bulk, unit-ton. | | 4.75 | - 5.00 |
| Tannic acid, NF, fluffy, bbls., 1,000-lb. lots | lb. | 2.05 | - — |
| bbls., smaller lots | lb. | 2.06 | - 2.07 |
| NF, powd., bbls., 1,000-lb. lots | lb. | 1.95 | - — |
| bbls., smaller lots | lb. | 1.96 | - 1.99 |
| Tech., dms. | lb. | 1.05 | - — |
| Tansy oil, dms. | lb. | 6.60 | - 8.00 |
| Tar acid oil, 15-18%, dms., c.l., frt. equald | gal. | .53½- | — |
| dms., l.c.l., same basis | gal. | .55½- | — |
| tanks, same basis | gal. | .43½- | — |
| Tar acid oil, 25-28%, dms., c.l., same basis | gal. | .60 - | — |
| dms., l.c.l., same basis | gal. | .62 - | — |
| tanks, same basis | gal. | .50 - | — |
| 50-53%, dms., c.l., same basis | gal. | .75 - | — |
| dms., l.c.l., same basis | gal. | .77 - | — |
| tanks, same basis | gal. | .65 - | — |
| Tar, coal (see Coaltar). | | | |
| Tartar emetic (see Antimony potassium tartrate). | | | |
| Tartaric acid, NF, 100-lb. bgs., c.l., frt. equald | lb. | .41 - | — |
| bgs., 10,000 lbs., 1 shipt., same basis | lb. | .43 - | — |
| bgs., smaller lots, same basis | lb. | .47 - | — |
| Terpine hydrate, NF, cryst., powd., 100-lb. fib. dms | lb. | .70 - | — |
| Terpineol, extra, dms. | lb. | .50 - | .60 |
| Prime, dms. | lb. | .40 - | .50 |
| Terpinyl acetate, extra, cns., dms. | lb. | .64 - | .75 |
| Prime, dms. | lb. | .53 - | .56 |
| Terpinyl propionate, dms. | lb. | 1.70 - | — |
| Terra alba (see Gypsum). | | | |
| Testosterone, USP, bots. | gram. | No prices. | |
| Testosterone propionate, USP, bots. | gram. | No prices. | |
| Tetrachloroethane, dms., works | lb. | .14½- | — |
| Tetrasodium pyrophosphate (see Sodium pyrophosphate). | | | |
| Tetrachloroethylene, tech. (see Perchloroethylene). | | | |
| Tetrachloroethylene, USP, 55-gal. dms., c.l., t.l., works | lb. | .20½- | — |
| dms., l.c.l., works | lb. | .22 - | .23½ |
| Tetraethyl orthosilicate, dms., c.l., dlvd. E | lb. | .60 - | — |
| dms., l.c.l., dlvd. E | lb. | .61½- | — |
| Tetraethyl pyrophosphate, 40%, cns., dms., frt. equald | lb. | .75 - | — |
| Tetraethylenepentamine, dms., c.l., dlvd. E | lb. | .53½- | — |
| dms., l.c.l., dlvd. E | lb. | .55 - | — |
| tanks, dlvd. E | lb. | .51 - | — |
| Tetraethylthiuram disulfide, tech., dms., frt. alld | lb. | 1.04 - | — |
| Tetrahydrofuran, dms., c.l., t.l., works | lb. | .36½- | — |
| dms., l.c.l., or l.t.l., works | lb. | .37 - | — |
| tanks, works | lb. | .35 - | — |
| Tetrahydrofurfuryl alcohol, dms., c.l., t.l., Memphis, Tenn. | lb. | .31½- | — |
| dms., l.c.l., Memphis, Tenn | lb. | .32½- | — |
| dms., c.l., t.l., Newark, N.J. | lb. | .33½- | — |
| dms., l.c.l., Newark, N.J. | lb. | .34½- | — |
| tanks, dlvd. E. of Denver | lb. | .31 - | — |
| tanks, dlvd. W. of Denver | lb. | .32 - | — |
| Tetrahydrophthalic anhydride, dms., c.l., t.l., frt. alld. E | lb. | .39 - | — |
| l.c.l., l.t.l., same basis | lb. | .41 - | — |
| Tetrapotassium phosphate (see potassium phosphate). | | | |
| Thallium metal, dlvd | lb. | 7.50 | -10.00 |
| Thallium sulfate, 99%, bots., dlvd. | lb. | 5.00 | -10.00 |
| Theobromine, NF, fib. dms., 100-lbs., f.o.b., works | lb. | 4.40 | - 5.50 |
| Theobromine and sodium acetate, USP, fib. dms., 500-lbs. works | lb. | 6.45 | - — |
| Theobromine, sodio-salicylate, NF, fib. dms., 500-lbs., works. | lb. | 3.80 | - — |
| Theophyline, USP, anhyd., 100-lb. dms., frt. alld | lb. | 3.65 | - — |
| Thiamine hydrochloride, USP, fib. dms., frt. alld | kilo. | 36.00 | - — |
| USP, ampule grade, fib., dms., frt. alld | kilo. | 38.00 | - — |
| Thiamine mononitrate, USP, fib. dms., frt. alld | kilo. | 36.00 | - — |

DELHI-TAYLOR'S Orthoxylene Plant on Stream...from inception to completion in **only 6 months**

Once again Delhi-Taylor has proved its reputation for performance . . . this time with the quick completion of its new orthoxylene plant to meet customer needs. The engineering survey was begun in January and material was processed on June 15! This is Delhi flexibility in action . . . its unique ability to expand into new petrochemicals with a minimum of delay.

■ The two 160 ft. high distillation towers, which feature unique plate design and arrangement, will be used primarily to produce high purity orthoxylene. The plant is designed so that other chemicals can be derived from the company's diversified petroleum and petrochemical feedstocks.

■ Delhi is now in production on high purity benzene, toluene, xylene, orthoxylene, higher boiling aromatics and a variety of aliphatic solvents. Our plant facilities are geared to move quickly in many new directions.

CHEMICAL DIVISION
**DELHI-TAYLOR OIL CORPORATION**
FIDELITY UNION TOWER, DALLAS 1, TEXAS • 415 MADISON AVE., NEW YORK 17, N. Y.
CORPUS CHRISTI • CHICAGO • CHARLESTON, S. C. • BATON ROUGE • HOUSTON

Thiocarbanilide, dms., ton lots lb. .72 - —
dms., less ton lots lb. .74 - —
Thiodiphenylamine (see Phenothiazine).
Thioflavin green toner, brilliant, molybdated, PMA, kgs., works lb. 5.20 - —
Tungstated, PTMA, kgs., works lb. 6.20 - —
Thioglycolic acid, refd., 55 gal. dms., ton lots, 100% basis lb. 1.15 - —
Thiosalicylic acid, 80%, dms., 1,000-lb., lots, works lb. 4.00 - —
Thiourea, tech., bgs., t.l., frt. alld. lb. .30 - —
bgs., ton lots, same basis lb. .32 - —
bgs., less than ton lots, same basis lb. .33 - —
Thorium nitrate, purif., fib. dms., 100-lb. lots or more. works lb. 3.50 - —
di Threonine, bots., 1-kilo lots kilo. 275.00 - —
Thyme leaves, French, triple sifted extra, bgs lb. .28 - —
Spanish, extra, bgs lb. .11 - —
triple sifted, bgs. lb. .25 - —
Spanish, bgs. lb. .09 - —
Thyme oil, NF, red, cns., dms lb. 1.80 - 3.00
NF, white, cns lb. 2.10 - 3.20
Tech., white, cns. lb. .40 - 1.85
Thymol, fib. dms., 25-lbs., f.o.b. works lb. 3.06 - —
Thymol iodide, NF, dms., 100-lbs. f.o.b. works lb. 7.40 - —
Timbo root (see Cube root).
Tin chloride (see Stannous chloride, anhyd.).
Tin crystals (see Stannous chloride, hydrous)
Tin metal (Straits) lb. 1.03 - —
Tin oxide (see Stannic oxide).
Tin sulfate (see Stannous sulfate).
Tin tetrachloride, anhyd. (see Stannic chloride, anhyd.).
Titanium dioxide, anatase, ceramic, bgs., c.l., divd. lb. .25½- —
bgs., l.c.l., divd. lb. .26½- —
reg., bgs., c.l., divd. lb. .25½- —
bgs., l.c.l., divd. lb. .26½- —
metallurgical, nat., bgs., c.l., f.o.b. Jacksonville, Fla. ton. 180.00 - —
bgs., 5-ton lots, Niagara Falls, N. Y. ton. 205.00 - —
bgs., ton lots, same basis. ton. 215.00 - —
Milled metallurgical titanium dioxide $7.50 per ton higher.
Titanium dioxide, rutile, nonchalking, bgs., c.l., divd. E lb. .27½- —
bgs., l.c.l., divd. E lb. .28½- —
Titanium dioxide-calcium pigment, 30% Ti $O_2$, reg., bgs., c.l., divd lb. .09⅜- —
bgs., l.c.l., works lb. .09⅜- —
50% Ti $O_2$, high-tinting, dms., c.l., lb. .14⅜- —
dms., l.c.l. lb. .14⅜- —
Titanium hydride, powd., dms., works lb. 8.10 9.00
Titanium tetrachloride, tech., dms., c.l., works lb. .26 - —
dms., l.c.l., works lb. .27½- .29
tanks, works lb. .20 - —
Tobias acid, dms., c.l., t.l. lb. .78 - —
dms., l.c.l. lb. .81 - —
d-a-Tocopherols, NF, mixer, conc., pure basis, bots kilo. 67.00 - —
d-a-Tocopheryl acetate, NF, conc., pure basis, bots kilo. 122.00 - —
d-a-Tocopheryl acid succinate, cryst., bots kilo. 109.00 - —
dl-a-Tocopherol, bots. kilo. 99.00 - —
dl-a-Tocopheryl acetate, bots kilo. 90.00 - —
25% dry, powd., bots kilo. 22.50 - 24.00
33⅓ dry, powd., bots. kilo. 30.00 - 31.50
o-Tolidine base, dry, kgs., 100% basis lb. 1.55 - —
Paste, kgs., 100% basis lb. 1.50 - —

**TOLUOL**
**Toluol quotations, both coaltar and petroleum, may be found under Toluene.**

o-Tolidine, hydrochloride paste, kgs., 100% basis lb. 1.50 - —
Tolu balsam, cns. lb. 3.50 - 3.65
Toluene, coaltar, indust., or nitration, tanks, dlvd. E. of Rockies gal. .25 - —
Toluene, petroleum, indust., tanks, dlvd. E. of Rockies gal. .25 - —
p-Toluenesulfonamide, powd., dms., t.l., works lb. .60 - —
dms., l.t.l., same basis lb. .63 - —
Toluenesulfonic acid, 55-gal. dms., t.l., frt. alld lb. .16 - —
1,000-lb. or more, same basis lb. .18 - —
less than 1,000-lb., same basis lb. .23 - —
tanks, same basis lb. .14 - —
Toluenesulfonic acid in 10-gal. dms., 2c. per lb. more.
p-Toluenesulfonic acid monohydrate, dms., c.l., or t.l lb. .90 - —
dms., 125 lbs. to t.l. lb. 1.00 - —
m-Toluidine, dms., c.l., works, frt. alld lb. .83 - —
dms., l.c.l., same basis lb. .84 - —
tanks, same basis lb. .82 - —
o-Toluidine, dms., c.l., works, frt. alld lb. .30 - —
dms., l.c.l., same basis lb .31 - —
tanks, same basis lb. .28 - —
p-Toluidine, tech., flake, dms., frt. alld lb. .50 - —
Cast, dms., frt. alld. lb. .45 - —
p-Toluidine-m-sulfonic acid, dms., works lb. .92 - 1.04
Toluidine red toner, deep shades, kgs., works lb. 1.70 - —
Light shades, kgs, works lb. 1.70 - —
2,4-Tolylenediamine, cryst., fib. dms., l.c.l., frt. alld lb. 1.10 - —
Tonka beans, Angostura, cks. lb. 1.50 - —
Brazilian, Surinam, cs. lb. 1.30 - —
Totaquine, 100-oz. lots, cns. oz. .42 - —
Toxaphene, dms., c.l., t.l., works. lb. .22 - —
dms., l.c.l., l.t.l., works lb. .28 - —
Tragacanth gum, No. 1, ribbons, cs lb. 4.10 - 4.20
No. 2, cs. lb. 3.75 - 3.80
No. 3, cs. lb. 3.40 - 3.65
USP, powd., bbls. lb. 1.05 - 1.15
Triacetin dms., c.l., divd. E. of Rockies lb. .39 - —
dms., l.c.l., same basis lb. .40 - —
tanks, same basis lb. .37 - —
Triallylamine, dms., c.l., divd lb. .985 - —
dms., l.c.l., divd. lb. .995 - —
tanks, divd lb. .96 - —
Tributyl citrate, tech., non-ret. dms., c.l., frt. alld. E. of Denver. lb. .42½- —
non-ret. dms., l.c.l., frt. alld. E. of Denver lb. .43½- —
tanks, frt. alld. E. of Denver lb. .40 - —
Tributyl phosphate, dms., c.l., works. lb. .52½- —
dms, l.c.l., same basis lb. .53½- —
tanks, same basis lb. .50 - —
Tributylamine dms., c.l., works lb. .67½- —
dms., l.c.l., same basis lb. .69 - —
tanks, same basis lb. .65 - —
Tributyrin, dms., l.c.l., divd. lb. .69 - —

Trichloroacetic acid, 300 lb. dms., c.l. lb. .52 - —
Trichlorobenzene, dms., c.l., frt. alld. E lb. .15 - —
dms., l.c.l., frt. alld. E. lb. .16 - —
tanks, frt. alld. E. lb. .13¼- —
Trichlorobenzene prices in the West 1¾c. higher.
1,1,1-Trichloroethane, dms., c.l., divd. lb. .13¼- —
dms, l.c.l., divd. lb. .16¼- —
tanks, divd. lb. .12¼- —
1,1,2-Trichloroethane, dms., c.l., works lb. .13½- —
dms., l.c.l., divd. E lb. .14¼- —
tanks, works lb. .11½- —
Trichloroethylene, dms., c.l., or t.l., divd lb. .14 - —
dms., l.c.l., divd. lb. .15¼- —
tanks, divd. lb. .12¾- —
Trichloroisocyanuric acid, dms., c.l., t.l., frt. equald lb. .65 - —
dms., l.c.l., same basis lb. .75 - —
Trichlorophenoxyacetic acid (see 2,4,5-T).
Tricholine citrate, 65% soln., ret. cbys., works, frt. adjusted. lb. 1.40 - 1.45
Tricresyl phosphate, coaltar, dms., c.l., divd lb. .35 - —
dms., l.c.l., divd. lb. .36 - —
tanks, divd. lb. .32½- —
Tricresyl phosphate, petroleum, dms., c.l., divd lb. .34½- —
dms., l.c.l., divd lb. .35½- —
tanks, divd. lb. .32½- —
Tridecyl alcohol, mixed isomers, dms., c.l., divd. E lb. .26½- —
dms., l.c.l., divd. E lb. .28 - —
tanks, divd. E lb. .24 - —
Triethanolamine, dms., c.l., divd. E. lb. .24½- —
dms., l.c.l., same basis lb. .26 - —
tanks, same basis lb. .22 - —
Triethanolamine lauryl sulfate, dms., c.l., t.l., frt. alld lb. .25½- —
dms., l.t.l., frt. alld. lb. .26½- —
tanks, frt. alld. lb. .24½- —
Triethylamine, dms., c.l., divd. E. lb. .50 - —
dms., l.c.l., same basis lb. .51½- —
tanks, same basis lb. .47½- —
Triethyl nitrate, refd., tech., non-ret. dms., c.l., frt. alld. E. of Denver lb. .46¼- —
non-ret. dms., l.c.l., frt. alld. E. of Denver lb. .47¼- —
tanks, frt. alld. E. of Denver. lb. .43¾- —
Triethyl phosphate, dms., c.l., divd. lb. .40½- —
dms., l.c.l., divd. lb. .42 - —
tanks, divd. lb. .38 - —
Triethylene glycol, dms., c.l., divd. E lb. .21 - —
dms., l.c.l., divd. E lb. .22½- —
tanks, same basis lb. .18½- —
Triethylenetetramine, dms., c.l., divd. E lb. .51½- —
dms., l.c.l., divd. E lb. .53 - —
tanks, divd E lb. .49 - —
Triisobutylene, tanks, divd. lb. .08 - —
Tri-isopropanolamine, dms., c.l., divd. E lb. .23¼- —
dms., l.c.l., divd. E lb. .24¾- —
tanks, divd. E lb. .20¾- —
Trimethylamine, anhyd., cyls., l.c.l., frt. equald, 100% basis lb. .30 - .305
tanks, frt. equald, 100% basis, lb. .26 - —
25-40% soln., dms., c.l., frt. equald, 100% basis lb. .35 - —
dms., l.c.l., frt. equald, 100% basis lb. .35½- —
tanks, 100% basis, frt. equald lb. .26 - —
Trimethylolpropane, dms., c.l., t.l., divd. E lb. .35 - —
dms., l.c.l., l.t.l., same basis lb. .36 - —
Trioxanes, pure, dms., c.l., t.l., works lb. .50 - —
dms., l.c.l., works lb. .51½- —
Tripentaerythritol, bgs., c.l., t.l., divd. E lb. .40 - —
bgs., l.c.l., l.t.l., divd. E lb. .41 - —
Triphenyl phosphate, bbls., c.l., frt. equald lb. .41½- —
bbls., l.c.l., frt. equald lb. .43½- —
Triphenylguanidine, bbls., works lb. .90 - —
Tripropylene, dms., c.l., divd. E gal. .44 - —
dms., l.c.l., same basis gal. .54 - —
tanks, same basis gal. .28 - —
Tripropylene glycol, dms., c.l., t.l., frt. alld. E lb. .20½- —
dms., l.c.l., l.t.l. frt. alld. E lb. .22 - —
tankcars and compartmented tankcars, frt. alld. E lb. .17½- —
Tripropylene glycol, tankwagon and compartmented tankwagons, 1,000 gals. min. frt. alld. E lb. .18 - —
Tripropylene glycol prices 1c. per lb. higher in west.
Trisodium phosphate (see Sodium phosphate tribasic).
dl-Tryptophane, fib., dms., works lb. 55.00 - —
Tung oil, dms., New York lb. .24½- .25
tanks, imported, N. Y. lb. .23 - —
tanks, domestic, mills lb. .22⅝- —
Tungsten metal, powd., 2.0-2.5 microns, dms., works lb. 4.25 - —
Tungstic acid, tech., dms., 1,000-lb. lots, works lb. 2.25 - —
dms., smaller lots, works lb. 2.45 - —
Turkey red, bbls., works lb. .62 - —
Turpentine, gum (see Protective Coatings market, Naval Stores).
Turpentine oil, NF, cns., dms lb. .28 - .50
Tuscan red, bbls., frt. equald lb. .26 - .32
Tyrothricin, USP, 1 to 5 kilos gram. .54 - —

# U

Ultramarine blue, cobalt type, dry or pulp, 250-lb. bbls., divd. E. of Rockies lb. .35 - .39½
Jobbing types, bbls., same basis lb. .19 - —
Regular types, dry bbls., same basis lb. .22½- .35
Ultramarine blue prices 1c. higher W. of Rockies.
Umber pigment, burnt, American, bgs., c.l., works lb. .07½- .07¾
bgs., l.c.l., works lb. .07¾- .08
Umber pigment, burnt, turkey-type, bgs., c.l., Boston, Bethlehem, Easton, Pa., Hiwassee, Va., N. Y. lb. .08¼- —
Raw, American, bgs., works lb. .07¾- .08¼
Turkey-type, bgs., works lb. .08½- .08¾
Undecylenic acid, dms. lb. 1.28 - —
Unicorn root, false (see Helonias root).
Unicorn root, true (see Aletris root).
Urea, 46% N, indust., bgs., c.l., l.t., divd. E ton. 125.00 - —
bgs., l.c.l., divd. E. ex whse. ton. 145.00 - —
45% N, agricultural, bgs., c.l., (30 tons) divd. E ton. 103.00 - —
Urea-ammonia liquor A, B, C & F grades, N basis, tanks, frt. equald ton. 120.00 - —
37 grade, tanks, same basis ton. 145.00 - —
Urethane, USP, dms., t.l., f.o.b., works lb. .65 - —
dms., l.t.l., same basis lb. .70 - —
Uva-ursi leaves, bls lb. .12 - —

# V

Valerian root, Belgian bgs. lb. .32 - —
Indian, bgs. lb. .25 - —
dl-Valine, dms., works lb. 21.00 - 27.50
Vanadium pentoxide, tech., dms., works lb. 1.38 - —
Vandyke brown, bbls., works lb. .09½- .12
Vanilla beans, Bourbon, tins lb. 10.75 - —
Mexican cuts, tins lb. 11.00 - —
whole, tins lb. 12.00 - —
Vanillin ex lignin, 100-lb. fib. dms., 1,000-lb. lots or more lb. 3.00 - —
100-lb. fib. dms., 500-lb. lots lb. 3.10 - —
100-lb. fib. dms., cns. 100-lb. lots lb. 3.25 - 3.35
Venetian red, jobbing, bgs., works. lb. .0475- —
Venetian red, 20%, bgs., works lb. .0525- —
25%, bgs., works lb. .0575- —
30%, bgs., works lb. .06 - —
35%, bgs., works lb. .0625- —
40%, bgs., works lb. .0675- —
Vetiver oil, Bourbon, cns. lb. 17.25 - 17.50
Haitian, cns. lb. 14.50 - 15.50
Victoria blue toner, molybdated, PMA 250-lb. bbls., divd. E. of Rockies lb. 4.50 - 4.95
Tungstated, PTMA, 250-lb. bbls., dlvd. E. of Rockies lb. 5.55 - —
Victoria blue toner, bbls., prices 1c. higher W. of Rockies.
Vinyl acetate monomer, zone 1, 55-gal. dms., c.l., dlvd lb. .1810- —
55-gal. dms., l.c.l., dlvd lb. .1960- —
tanks, dlvd. lb. .1560- —
tanktrucks less than 4,000 gal., dlvd lb. .1610- —
Zone 2, 55-gal. dms., c.l., dlvd lb. .1910- —
55-gal. dms., l.c.l., dlvd lb. .2210- —
tanks, dlvd. lb. .1660- —
Vinyl acetate monomer, zone 2, tanktrucks, less than 4,000 gals. dlvd lb. .19 - —
Zone 1 is all continental US except zone 2, zone 2 comprises Ariz., Calif., Idaho, Mont., Nev., Ore., Utah and Wash.
Vinyl n-butyl ether, tech., dms., l.c.l., works lb. .50 - —
Vinyl chloride monomer, tanks, works lb. .125 - —
Vinyl ether USP, anethesia, bots., 50cc., hospitals bot. 1.12 - —
bots., 75cc., hospitals bot. 1.56 - —
Vinyl ethyl ether tech. dms., c.l., works lb. .29¼- —
dms., l.c.l., works lb. .30 - —
tanks, works lb. .27¼- —
Vinyl propionate monomer, dms., c.l., divd lb. .49 - —
dms., l.c.l., same basis lb. .50 - —
tanks, same basis lb. .47 - —
Vinyl trichloride (see Trichloroethane).
2-Vinylpyridine, 10 dms. to tanks, works lb. 1.20 - —
1 to 9 dms., works lb. 1.35 - —
tanks, works lb. 1.15 - —
Vinyltoluene, dms., c.l., f.o.b., works, lb. .16½- —
dms., l.c.l., same basis lb. .18½- —
tanks, f.o.b. dest. frt. prepaid lb. .14 - —
Viosterol in nat. vegetable oil, 1,000,000 D units per gram, bots., lots of 10 billion USP units 1,000,000 units. .02½- —
Virginia type red, bbls., works lb. 1.40 - —
Vitiamin A acetate, syn., cryst., beads, 500,000 A units per gram gram .07¼- —
Vitamin A acetate, dry, 500,000 units per gram, kilo lots kilo. 65.00 - —
325,000 units per gram, same basis kilo. 43.88 - —
250,000 units per gram, same basis kilo. 33.75 - —
Dry vitamin A acetate in less than kilo lots, $1.25 to $2.50 per kilo higher.
Vitamin A, liq. in oil, 1,000,000 A units per gram 1,000,000 units. .09½- —
Vitamin A palmitate, liq., 1,000,000-1,800,000 A units per gram 1,000,000 units. .09½- —
Vitamin $B_1$ (see Thiamine hydrochloride).
Vitamin $B_2$ (see Riboflavin and Yeast).
Vitamin $B_{12}$, cryst., USP (cyanocobalamin), 1-50 grams, vials, tins gram. 95.00 - —
0.1% vitamin $B_{12}$, USP, adsorbed on gelatin, 100 and 500-gram bots on 1-5 kilo dms gram. 1.14 - —
0.1% vitamin $B_{12}$, USP adsorbed on resin, 100 and 500-gram bots., 1-5 kilo dms gram. 1.14 - —
Vitamin $B_{12}$, oral grade solids in containers of 1 and 10 gram of $B_{12}$ activity gram. 85.00 - —
0.1% trituration of cryst., $B_{12}$ with dicalcium phosphate or mannitol, 1-10 kilo. 109.00 - —
Vitamin $B_{12}$, 0.1% cobalamin concentrate, NF, adsorbed on resin, 500-gram bots., 1-5 kilo, dms., frt. alld gram. .90 - —
0.1% cobalamin concentrate in gelatin, 1-10 kilo. dms., frt. alld gram. .90 - —
Vitamin C (see Ascorbic acid).
Vitamin $D_2$ (see Codliver and Fishliver oils, Calciferol and Viosterol).
Vitamin D, dry, 850,000 units per gram, kilo lots kilo. 42.50 - —
850,000 units per gram less than kilo lots kilo. 45.00 - —
Vitamin E (see a-Tocopherol and Wheat germ oil).
Vitamin H (see Biotin).
Vitamin K, active (see Menadione).
Violet methyl toner (see Methyl violet toner).
VM&P naphtha (see Naphtha, VM&P, petroleum).

# W

Wahoo root bark, bls. lb. 2.00 - 2.25
Warfarin, 0.5%, dms., 50-lb. lots, dlvd lb. 1.95 - —
dms., 25-49-lb. lots, New York or Chicago lb. 2.05 - —
dms., 5-24-lb. lots, New York or Chicago lb. 2.15 - —
Watchung-type reds., bbls lb. 1.95 - —

**WAXES**
**Wax quotations are listed individually. For example, prices on Wax, carnauba, may be found in the C's under Carnauba wax.**

Wheat germ oil, 5-gal. dms. gal. 12.25 - —
White lead (see Lead, white).
White mineral oil (see Mineral oil, white).
White pine bark, rossed, bls. lb. .21 - .22
White precipitate, USP, powd., dms., 100 lbs., f.o.b. works lb. 5.50 - —
Whiting (see Calcium carbonate).
Wild cherry bark, thin, nat., bls lb. .22 - —
Thin, rossed, bls. lb. .22 Nom.
Wintergreen oil, USP nat. northern, cns lb. 6.35 - 17.50
USP, nat. southern cns lb. 3.75 - 7.00
Wintergreen oil, syn. (see Methyl salicylate).
Witch hazel bark, bls lb. .16 - .17
Witch hazel leaves, bls. lb. .25 - —
Wollastonite fine bgs., c.l., works. ton. 39.50 - —
bgs., l.c.l, ex whse ton. 56.00 - —
Medium, bgs., c.l., works ton. 27.00 - —
bgs., l.c.l., ex whse. ton. 44.00 - —
Wood alcohol (see Methanol).
Wood oil (see Tung oil).
Woolfat crude (see Degras).
Woolfat USP (see Lanolin).
Wormseed Levant bgs. lb. 2.50 - —
Wormseed oil (see Chenopodium oil NF).
Wormwood oil, cns lb. 4.75 - 5.00

# X

Xylene coaltar, indust., tanks, works:
Bethlehem, Pa. gal. .29 - —
Birmingham dist. gal. .29 - —
Chicago dist. gal. .28½- —
Cleveland dist. gal. .29 - —
Geneva, Utah gal. .29 - —
Johnstown, Pa. gal. .29 - —
Lackawanna, N. Y gal. .29½- —
Xylene, coaltar, indust., tanks, works:
Lone Star, Tex. gal. .27 - —
Lorain, Ohio gal. .29 - —
Middletown, Ohio gal. .30 - —
Minnequa, Col. gal. .29 - —
Philadelphia dist. gal. .29 - —
Pittsburgh dist. gal. .29 - —
Sparrows Point, Md. gal. .29 - —
Terre Haute, Ind. gal. .29 - —
Youngstown, Ohio gal. .29 - —
Xylene, petroleum, indust., tanks f.o.b. works:
Bayonne, N. J gal. .29 - —
Baytown, Tex. gal. .27 - —
Charleston, S. C. gal. .29 - —
Chicago, Ill gal. .28½- —
Detroit, Mich., dlvd gal. .27½- .29
Houston, Tex. gal. .27 - —
Philadelphia, Pa. gal. .29 - —
Providence, R. I. gal. .30 - —
Sewell's Point, Va. gal. .28 - —
Wood River, Ill. gal. .28½- —
m-Xylene, 95%, dms., c.l., f.o.b., Richmond, Calif lb. .25 - —
dms., l.c.l., f.o.b., Richmond, Calif. lb. .26 - —
tanks, frt. alld. lb. .23 - —
o-Xylene, dms., c.l., works lb. .08 - —
dms., l.c.l., works lb. .09 - —
tanks, works lb. .06 - .06½
p-Xylene, dms., c.l., works lb. .20 - —
dms., l.c.l., works lb. .21 - —
tanks, frt. alld. lb. .1645- —
Xylenol, cryst., 45°-47°C., m.p., dms., l.c.l., works lb. .23 - —
56°-58°C., m.p., dms., l.c.l., works, frt. equald lb. .33 - —
Xylenol, cryst., 60°-62°C., m.p., dms., l.c.l., same basis. lb. .40 - —
Xylenol fraction, b.r. 7°-9° C., dry above 227° C., dms., c.l., same basis gal. 1.25 - —
dms., l.c.l., same basis gal. 1.30 - —
tanks, same basis gal. 1.05 - —
b.r. 7°-9° C., dry at or below 227° C., dms., c.l., same basis. gal. 1.35 - —
Xylenol fraction, b.r. 7°-9° C., dry at or below 227° C., dms., l.c.l., same basis. gal. 1.40 - —
2,4-Xylidine, tech., dms., frt. alld. lb. 1.15 - —
2,5-Xyliline, tech., dms., frt. alld. lb. 1.20 - —
Xylidines, mixed, o-m-p, dms., c.l., or t.l., works lb. .39 - —
dms., l.c.l., same basis lb. .40 - —
tanks, same basis lb. .33 - —

**XYLOL**
**Xylol quotations, both coaltar and petroleum, may be found under Xylene.**

# Y

Yara yara oil, cns. lb. 2.15 - 3.05
Yeast, brewers, debittered, USP XV, Saccharomyces, dlvd lb. .27 - —
primary, USP XV, 150 mcg. $B_1$ per gram, 100-lb. dms lb. .47 - —
USP XV, 270 mcg., $B_1$ per gram, 100-lb. dms lb. .52 - —
USP XV, 300 mcg., $B_1$ per gram, 100-lb. dms lb. .56 - —
USP XV, 900 mcg., $B_1$ per gram, 100-lb. dms. lb. .60 - —
Torula, USP, dlvd. lb. .18 - —

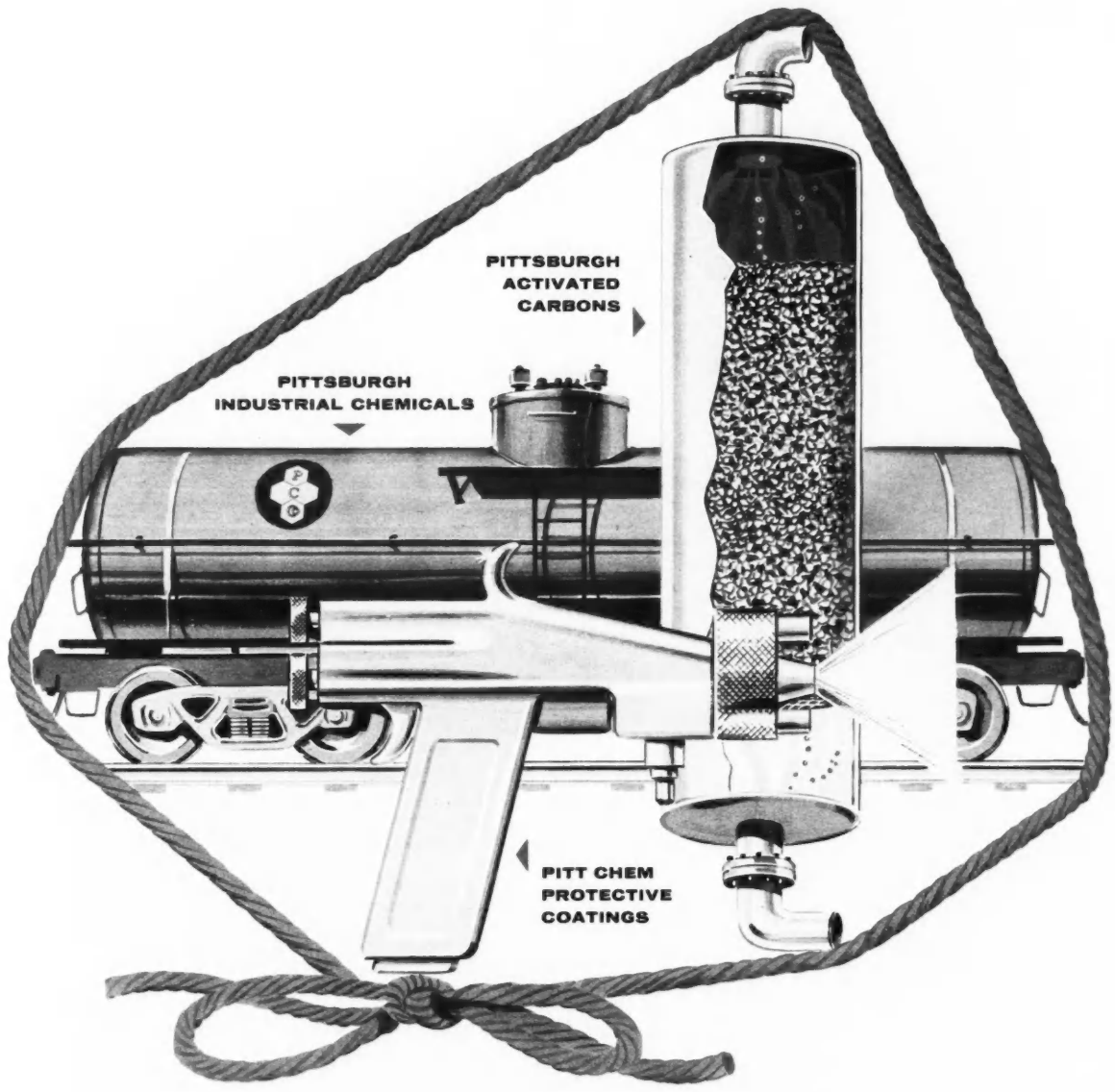
**YELLOW PIGMENTS**
**Yellow pigment quotations are listed individually. For example, prices on Yellow, benzidine, may be found in the B's under Benzidine yellow.**

Yerba santa leaves, bls. lb. .40 - .45
Ylang-ylang oil, Bourbon, bots. lb. 7.00 - 22.00
extra, bots. lb. 24.00 - 33.00
extra, bots. lb. 24.00 - 33.00
Yohimbine hydrochloride, bots., tins. oz. 3.75 - 4.25

# Z

Zein, bgs., 36,000-lb. lots or more, bgs., 500-lb. lots or more, dlvd lb. .343 - —
bgs., smaller lots, dlvd lb. .373 - —
Zinc acetate, NF, VIII, dms lb. .53 - —
Tech., dms., l.t.l., works lb. .29¾- —
Zinc borate, bgs., 1,000 lbs or more, works lb. .25 - —
bgs., less than 1,000 lbs., same basis lb. .27 - —
Zinc chloride, NF, gran., dms lb. .42 - —
NF, precip., powd., dms lb. .26 - —
Tech., soln., 50%, dms., c.l., works 100 lbs. 5.80 - —
dms., l.c.l., works 100 lbs. 6.40 - —
tanks, works 100 lbs. 5.15 - —
fused, dms., c.l., works 100 lbs. 10.70 - —
dms., l.c.l., works 100 lbs. 11.20 - —
gran., fib. dms., c.l., works. 100 lbs. 11.45 - —
fib. dms., l.c.l., works. 100 lbs. 11.95 - —
Zinc chromate bbls., dlvd. lb. .29 - —
Basic bbls., dlvd. lb. .34 - —
Zinc cyanide, dms., 1,000-lb. lots or more, works lb. .55 - —
dms., smaller lots, works lb. .57 - —
Zinc dust coml. bbls., c.l., works. lb. .17 - —
Pigment, bbls., c.l., works lb. .16½- —
bbls., l.c.l., works lb. .18¼- —
Zinc fluoride, bbls., works lb. .49 - .50
Zinc hydrosulfite, dms., c.l., frt. alld. lb. .21½- —
dms., l.c.l., frt. alld. lb. .23½- —
Zinc metal prime western, slabs, E. St. Louis lb .13 - —
Prime western slabs, New York. lb. .13¼- —
Zinc naphthenate liq. 8% Zn., dms., frt. alld. lb. .27 - —
10% Zn., dms., frt. alld. lb. .33 - —
Zinc nitrate tech. cryst., bbls., works lb. .20 - —

—Continued on page 63




**Three** experienced organizations
**now tied together under a new name...**

**PITTSBURGH CHEMICAL CO.**
Grant Building Pittsburgh 19, Pa.
A Subsidiary of Pittsburgh Coke & Chemical Company

## PITTSBURGH CHEMICAL COMPANY

Pittsburgh Chemical Company is a basic producer of industrial chemicals, activated carbons and protective coatings. Today, as in the past (when you may have purchased these materials from the former divisions of Pittsburgh Coke & Chemical Company) our basic position is your assurance of high purity products, delivered to your production schedule, regardless of market conditions or the size of your order.

As an autonomously operating subsidiary, concentrating in chemicals and chemical products, our new organization is able to offer you these additional reasons for relying on Pittsburgh. A planned program for expansion of our production and marketing facilities is moving ahead rapidly. And today we're in a better position than ever to offer you alert, personalized sales service and practical technical assistance in the more efficient application of Pittsburgh products in your plant. Our entire organization is geared to a single objective—to help you produce a better product at a *lower* cost.

For additional information on any of the products listed below write, wire or phone us by our new name—Pittsburgh Chemical Co.

### INDUSTRIAL CHEMICALS DIVISION

A broad line of coal-derived industrial chemicals and chemical specialties for the chemical, plastics, paint, pharmaceutical and process industries.

| | PRODUCT | DESCRIPTION | USES |
|---|---|---|---|
| INTERMEDIATES | PHTHALIC ANHYDRIDE | **Specifications:**<br>Color (Molten), Hazen ..... max. 55<br>Solidification Point ..... min. 131°C<br>White flakes; sediment free. | Manufacture of alkyd resins, plasticizers, dye intermediates, and other organic chemicals. |
| | MALEIC ANHYDRIDE | **Specifications:**<br>Color (Molten), Hazen ..... max. 20<br>Solidification Point ..... min. 52.5°C<br>Assay ..... min. 99.5% | Polyester resins, alkyd resins, vinyl resins, rosin modified resins, drying oils, dyestuffs, pharmaceuticals, textile chemicals, synthetic tanning agents. |
| | FUMARIC ACID | **Specifications:**<br>Assay as Fumaric Acid ..... min. 99.5%<br>Maleic Acid ..... max. 0.1%<br>Ash ..... max. 0.02% | Polyester resins, alkyds, rosin esters, modified phenolics, pentaerythritol esters. |
| TAR ACIDS | PHENOL | 39°C—Min. phenol content ..... 97%<br>95%—Min. phenol content ..... 95%<br>90-92%—Min. phenol content ..... 90%<br>82-84%—Min. phenol content ..... 82% | **Manufacture of plastics and resins, adhesives, dye intermediates and herbicides. Lubricating oil refining.** |
| | ORTHO CRESOL | **25-28°C Ortho Cresol**<br>Solidification Point, wet ..... min. 25°C<br>Assay ..... min. 86%<br>Distillation Range (inc. 191°C) ..... max. 5°C<br>**30°C Ortho Cresol**<br>Solidification Point, wet ..... min. 30°C<br>Assay ..... min. 97%<br>Distillation Range 5-95% (inc. 191°C) ..... max. 2°C | **Manufacture of plastics, resins, and insecticides. Refining of lubricating oils.** |
| | META PARA CRESOL | **3°C Meta Para Cresol**<br>Distillation Range 3°C, 5-95% .... 200-204°C<br>Sp. Gr. (15.5/15.5°C) ..... 1.030-1.040<br>**12°C Meta Para Cresol**<br>Distillation Range 10°C, 5-95% ... 200-210°C<br>Sp. Gr. (15.5/15.5°C) ..... 1.031-1.041 | **Manufacture of plastics, resins and plasticizers.** |
| | XYLENOL | **Light brown to a red clear liquid containing the various Xylenols, some Cresols, and higher boiling tar acids. Various grades available.** | **Manufacture of synthetic resins, adhesives and germicides.** |
| TAR BASES | PYRIDINE | **2°C Pyridine**<br>Water white liquid with strong odor.<br>Purity ..... min. 98%<br>Distillation Range 2°C max. ..... 114° to 117°C<br>Sp. Gr. (15.5/15.5°C) ..... 0.983-0.989<br>Also 10°, 15°, and 20° pyridine bases. | Manufacture of pharmaceuticals, dyestuffs, rubber chemicals and water repellents. Extremely versatile solvent, acid acceptor and catalyst. |
| | ALPHA PICOLINE | **2°C Alpha Picoline**<br>Colorless liquid with strong odor.<br>Soluble in water and most organic solvents.<br>Distillation Range 2°C max. 127.5° to 130.5°C | Manufacture of pharmaceuticals, dyestuffs and rubber chemicals. Solvent in various processes. |
| | REFINED MIXED PICOLINES | **Refined Mixed Picolines**<br>Colorless liquid with strong odor.<br>Soluble in water and most organic solvents.<br>Distillation Range 3°C max. ..... 140° to 145°C | Manufacture of vitamins, pharmaceuticals, textile waterproofing agents and textile specialties. |

| PRODUCT | DESCRIPTION | USES |
|---|---|---|
| **INORGANICS** | | |
| **SULPHURIC ACID** | **66° Bé Sulphuric**<br>66° Baume ..... min. 93.2% $H_2SO_4$<br>Sp. Gr. (15.5/15.5°C) ..... min. 1.835 | Pickling and cleaning metals. Manufacture of fertilizers, textiles, organic and inorganic chemicals. Processing of leather, textiles and petroleum. |
| **OLEUM** | **20% Oleum**<br>Free $SO_3$ ..... min. 20%<br>Assay $H_2SO_4$ ..... min. 104.5%<br>Sp. Gr. (15.5/15.5°C) ..... min. 1.916 | Sulfonation of organic compounds; component for nitration of organic compounds. |
| **PLASTICIZERS** | | |
| **PHTHALATE ESTERS** | A broad range of phthalate plasticizers produced from our own phthalic anhydride to provide an excellent balance of desirable performance characteristics. Includes a number of combinations of the following alcohols: octyl, isooctyl, isodecyl, butyl, tridecyl, n-octyl n-decyl. | **Primary plasticizers for polyvinyl chloride compounds including vinyl film and sheeting, coated fabrics, flooring, wire jacketing, extrusions, plastisols, etc.** |
| **ADIPATE ESTERS** | Adipate plasticizers provide low temperature flexibility, viscosity stability. Available as esters of n-octyl n-decyl, isooctyl, and 2 ethylhexyl alcohol. | **Calendering film, sheeting, vinyl dispersions, extrusions.** |
| **SEBACATE ESTERS** | Sebacates impart extreme low temperature flexibility, low volatility and low water extraction. Available as esters of butyl and octyl alcohols. | **Vinyl film, oil resistant rubber compounds, cellulosic derivatives and oil resistant synthetic rubbers.** |
| **EPOXY PLASTICIZERS** | Epoxidized soy bean oil and octyl epoxy tallate plasticizers and stabilizing polyvinyl chloride resins. | **Provides excellent heat and light stability to vinyl formulations.** |
| **TRICRESYL PHOSPHATE** | Provides flame retardancy and imparts excellent permanence and volatility properties. | **Vinyl film sheeting, and electrical insulation.** |
| **SPECIALTY PRODUCTS** | | |
| **PHTHALOCYANINES** | Blue Base B4E, Blue Presscake B1C, BNC, Green Presscake G1S, Green Presscake G1B, Green Dispersed Paste G2S, Green Toner G3S. | Pittsburgh Phthalocyanines are used in the coloring of printing inks, paints, rubber, plastics and textiles. |

CTIVATED CARBON DIVISION

Coal-derived Pittsburgh Activated Carbons possess a rigidly controlled pore structure which results in exceptional adsorption qualities. In purification, decolorization, catalysis, recovery or refining of a liquid or a gas, Pittsburgh Granular Activated Carbons, in a continuous column system, perform the job more efficiently and economically than any other material available.

## Pittsburgh Granular Carbons for Liquid Phase Applications

| Product | U.S. Sieve Series | Uses |
|---|---|---|
| **TYPE SGL** | **8 x 30** | Corn sugar refining for the purification and decolorization of corn starch hydrolysate liquors. |
| **TYPE CAL** | **12 x 40** | Cane sugar refining, where liquors of exceptionally low color and high purity must be produced. |
| **TYPE OL** | **20 x 50** | Purification and decolorization of sodium acetate, benzoic acid, plating baths, caustic liquors, mineral acids, etc. |
| **TYPE GW** | **10 x 30** | Purification of industrial and municipal water supplies. |

## Pittsburgh Granular Carbons for Vapor Phase Applications

| Product | U.S. Sieve Series | Uses |
|---|---|---|
| **TYPE BPL** | **4 x 10**<br>**6 x 16**<br>**12 x 30** | Vapor adsorption field, typical of which is the solvent recovery system. Used as catalyst support in acetylene process for production of vinyl monomers. Also used in the removal of organic sulfur compounds and other contaminants from gas streams. |

## Pittsburgh Pulverized Carbons for Liquid Phase Applications

| Product | U.S. Sieve Series | Uses |
|---|---|---|
| **TYPE RB**<br>**TYPE RC** | **75 to 85%**<br>**−325** | Where a granular system is not feasible, Pittsburgh offers two highly active pulverized carbons for use in decolorization, purification and isolation of numerous chemical, pharmaceutical and food products. |

Provides a comprehensive family of heavy-duty coal tar and Gilsonite-asphalt coatings compounded for the chemical, marine, petroleum, water and sewage, pulp and paper and general plant maintenance fields. Also supplies industry with a number of specialty products.

## PITT CHEM TARMASTIC® SERIES AND TARSET®

| PRODUCT | DESCRIPTION | USES |
|---|---|---|
| TARMASTIC 101 | A heavy-duty coal tar coating that withstands severe corrosion. | Protection of metal, masonry, stone and brick against corrosive vapors, acid and alkali spillage and moisture. |
| TARMASTIC 102 | A thin, high gloss coal tar coating for general maintenance purposes. | Protects fencing, stored pipe, window sash against mild corrosion. An excellent vehicle for aluminum paint. |
| TARMASTIC 103 | A coal tar coating for surfaces exposed to corrosive vapors, dilute acids and alkalis. | General maintenance of structural steel and concrete. |
| TARMASTIC 104 | An approved coal tar coating designed to protect potable water systems. | Used to protect tanks, interiors and exteriors and pipe interiors carrying or storing potable water. |
| TARMASTIC 105 | Flexible water vehicle coal tar coating for protection against weather, industrial and refinery corrosion. | Effective protection against aliphatics. Driveway sealer. Fire retardant roof coating. |
| TARMASTIC 106 | A coal tar coating to protect surfaces against moisture, seepage and rust. | Protects concrete pads for tank and silo bottoms. Flashing cement for metal roofs. |
| TARMASTIC 107 | A coal tar water vapor barrier coating for pipe and general industrial needs. | Repair cement on oil and gas transmission lines. Pipe joints and pipeline river-weights. |
| TARSET® | Patented coal tar-epoxy resin coating, that withstands high temperatures, extreme corrosion. Two component (catalytic-setting) coating system. Patent No. 2,765,288. | Extremely resistant to chemical corrosion attack. Protection of metal and concrete surfaces above and below ground from severest corrosive conditions. |

## PITT CHEM INSUL-MASTIC®—VAPOR SEAL AND INSULATING MASTICS®

| PRODUCT | DESCRIPTION | USES |
|---|---|---|
| INSUL-MASTIC 4010 SERIES | Universal, heavy-duty Gilsonite-asphalt vapor-seal coatings designed to protect surfaces against atmospheric corrosion, and corrosive vapors. | Industrial plant maintenance, weather and moisture barrier in marine atmospheres, as a vapor seal barrier over block type insulation, for moisture control. |
| INSUL-MASTIC 553 SERIES | Cork-impregnated heavy-duty insulating mastics. Provide up to 65% heat retention. Require no mechanical attachment. Provide insulation, prevent corrosion. | Thermal insulation, condensation control, sound deadening. |
| INSUL-MASTIC MICA MASTICS | Heavy, resilient protective coating of mastic consistency. Contains 15 to 25% flake mica. | Protection of building and home exteriors from moisture penetration. Beautifies and insulates by reflection of solar radiation. |
| INSUL-MASTIC SPECIALTY PRODUCTS | Caulking compounds, mastics, primers, cork mastics, paints. | Caulking, roofing, railroad coatings, undercoatings, color top coats, etc. |

## OTHER PITT CHEM PRODUCTS

**PITT CHEM COAL TAR PIPELINE ENAMELS**—protect thousands of miles of underground oil and gas transmission lines throughout the United States.

**COAL TAR** for road tar and rubber blends.

**CREOSOTE** for wood preservatives and insecticides.

**COAL TAR PITCH** for electrodes, coating and roofing manufacture.

## PITTSBURGH CHEMICAL COMPANY REGIONAL SALES OFFICES

**Pittsburgh 19, Pennsylvania**
2000 Grant Building
ATlantic 1-8950

**New York 17, New York**
285 Lexington Avenue
OXford 7-9050

**Summit, Illinois**
7750 W. 61st Place
LUdlow 2-2650 (Chicago)

**Houston 19, Texas**
3115 Buffalo Drive
JAckson 3-8351

**San Francisco 24, California**
1485 Bayshore Blvd., Box 88
JUniper 6-7535

**Nashville, Tennessee**
1719 West End Bldg., Suite 718
ALpine 5-7228

**Glendale 5, California**
223 E. Broadway
CHapman 5-1228

PCCO. INT. 1

LITHO IN U

# Oil, Paint and Drug Reporter

THE CHEMICAL MARKET AUTHORITY

Founded October 18, 1871 by William O. Allison
Directed 1900-1942 by Harry J. Schnell

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## A LOOK AT THE FIGURES

### Chemicals Production: How It's Going

| | | June 1960 | June 1959 |
|---|---|---|---|
| Acetic Acid, Synthetic | lbs. | 63,710,346 | 55,416,743 |
| Acetone | lbs. | 66,145,114 | 60,422,339 |
| Ammonia, Anhydrous | tons | 407,907 | 386,755 |
| Benzene | gals. | 37,890,214 | 31,512,411 |
| Chlorine | tons | 377,055 | 349,546 |
| Formaldehyde (37% basis) | lbs. | 143,937,706 | 149,652,349 |
| Methanol, Synthetic | lbs. | 143,777,903 | 144,751,717 |
| Phthalic Anhydride | lbs. | 31,988,901 | 31,850,121 |
| Sodium Hydroxide (Caustic Soda 100% NaOH) | tons | 402,923 | 387,854 |
| Sulfuric Acid (100% $H_2SO_4$) | tons | 1,495,438 | 1,469,489 |

Sources: Tariff Commission, Bureau of Census

## "Hope" Needs Charity

The steamship "Hope" is scheduled to sail from San Francisco September 21, inaugurating the project of the People-to-People Health Foundation, comprising the providing of modern medical knowledge, skills, and techniques to physicians, pharmacists, nurses, and others engaged in health services among under-developed peoples. The "Hope" is a hospital ship, fully staffed with doctors, nurses, and technicians as a floating medical school and service center. It will start its services in the needy areas of Southeastern Asia, beginning with Indonesia.

"We think this is a way of waging the peace," said the president of the sponsoring foundation. "We have enough faith in our system to believe our work will pay off in more than just medical training." In the words of a prominent executive in the drug industry, "This project will be our finest effort to hold and win friends overseas, carrying with it the strong spirit of American free enterprise, a bulwark against communist influence from beyond our shores." Certainly there is as much need for this service as there is for that of the food-for-peace program of the federal government.

Project Hope is wholly a privately promoted undertaking — although the ship has been furnished by the navy. Its first year operation, it is estimated, will cost three and a half million dollars. At latest reports, something like half that amount has been contributed. A call has been made for contributions of money and supplies necessary to assure the departure of the adequately equipped ship on time. Organizations in the drug industry have circulated that call; the essentiality of supplies of sanitary and other chemical materials should be similarly recognized in the organizations in that industry. No doubt they have already become actively interested.

Supplies must be received by Project Hope, Navy Yard, Hunter's Point, San Francisco, by September 15. Financial contributions should be sent to Project Hope, P.O. Box 9808, Washington 15, D.C. All contributions are tax-deductible.

In common with all endeavors in the service of human welfare, Project Hope is based on faith and depends upon charity. It should not be disappointed in that dependence.

## Air Pollution Control

An international congress on air pollution will be in session in New York City during the last two days of the current week. Those who have had any experience in connection with programs and endeavors to deal with air pollution know that the attendant problems could not be fully covered informatively or intelligently in two months. But, enough can be learned in two days—if the time be properly and adequately occupied instructively and attentively —to enable one who really wants to do something in this serious matter to try to make a start when he arrives at a locality and intentional position to apply what he has learned.

One needs but read what little gets into the public press—especially in and around the city where the congress is to be held—to know something about the complications in all areas of thinking with reference to either the causes of air pollution or whether preventive or remedial treatment is the more effective—and what is real treatment of either type.

New York City appointed a new air pollution control commissioner a short time ago. At the time, neither he nor the mayor would give unqualified support to a report by the city administrators office that minimized the department's accomplishments and recommended that it be reorganized. A short time later, the commissioner pointed out some of the complexities of the control problem in replying to a criticism contributed to a local newspaper. Among other things, he pointed out that the advisers of the governor had advocated abolition of the state board of control, and that a bill, backed by the Citizens Union, to provide assistance toward more effective municipal control efforts had been blocked in the legislature for several years. There was no obvious connection between those charges and a departmental report that there had been a record number of pollution violations during the first six months of the current year. A short time earlier the department had reported that the fall of soot in the city had decreased from more than five tons on each square-mile in 1944 to two tons in 1959.

Most of the contributions on air pollution to newspapers in the East have to do with the necessity of dealing with that caused by automobile exhausts and how to deal with it. In large part, they vigorously urge that the regional states should enact legislation of the California type, making it mandatory for all cars to be equipped with a special muffler.

Those who really want to learn something contributory toward some measure of success in dealing with air pollution, should make arrangements to get a copy of the report scheduled for publication shortly by the air pollution and health departments of New York City, on a study undertaken about a year ago to examine the links between impure air and health. They should also get a copy of the report by Dr. D. F. Eastcott to the recent symposium on lung cancer, held in California. Of course, they should studiously peruse "Air Pollution and Smog" and all the other publications of the Air Pollution Foundation, 2556 Mission street, San Marino, California.

And all potential air polluters—motorists or industrialists—as individuals and as members of business staffs or organizations should collaborate in full with the foundation toward the attainment of its increasingly imperative objective. What can be done in that direction was made informatively clear at a meeting two weeks ago, at the refinery of New Jerseys biggest petroleum company, of New York and New Jersey officials and representatives of industry. The oil company, whose control program was first surveyed thirty-five years ago, told how it has "taken care of most obvious problems where impressive results could be obtained quickly" and is "continuing to devote a great deal of effort to pollution abatement items," with encouraging results toward meeting and effectively dealing with the "never-ending challenge."

Since air pollution has no respect for state lines, it must be expected that the increasing concern of the federal government with matters of health will motivate the enactment of perhaps a progressive legislative program dealing with its interstate aspects, to be followed, as in the case in pure food and drug legislation, by the enactment of locally implementing and complementing state laws. Two months ago, the New Jersey Air Pollution Commission held a public hearing on a proposed rule to ban "substances in such quantities as shall result in air pollution." The agency had had complaints from several localities about air pollution—mainly industrial. The proposed rule was opposed by several industries and business organizations on charges that it was too vague and discriminatory. The commission held up action on the rule to permit comments on it to be sent in.

## *Washington Talks It Over*

### PHS Go-Ahead for Live Polio Vaccine Raises Troublesome Question for the Drug Industry: What Are the Implications of the Plan to Administer the Sabin Strains on a Mass Basis?

By Arthur R. Kavaler

In the bagful of problems that Public Health Service has deposited on the doorstep of the drug manufacturers with the official go-ahead for live polio vaccine, one question is emerging as the most troublesome of all:

What are the implications of the PHS plan to administer the Sabin strains on a mass, rather than individual, basis?

The health agency maintains that the live virus vaccine should not be given out to private physicians, but instead should be distributed to entire communities on a wholesale basis. This is how smallpox, diphtheria, whopping cough and certain other vaccinations are administered.

Pointing out that individuals receiving the live polio viruses can pass them on to non-vaccinated persons—perhaps in a more virulent form—PHS argues that mass administration is the only way to guard against such an unhappy circumstance.

Dr. Albert E. Sabin, developer of the three strains getting government approval, agrees that group administration is probably the best way to avoid this unwitting spread of polio.

The drug makers and the American Medical Association are still to be heard from. However, there is little doubt that mass administration is an odius idea to the doctors, who are sure to view any such program as another threat of socialized medicine.

As for the pharmaceutical houses, the prospect of having to sell their output of Sabin vaccine to the government, instead of on the open market, has little appeal to firms faced with monumental technical problems and heavy investments before they can get into commercial production.

There is also a real question as to whether PHS has the authority to insist on community-wide administration of the Sabin vaccine.

At the moment, the agency contents itself with the statement that mass use of the live polio vaccine "will be more appropriate on a community than on an individual basis."

Whether it can make this softly-worded suggestion stick—when the vaccine becomes generally available about nine months from now—remains to be seen.

*Ralph L. Cherry, who regularly writes Washington Talks It Over, is on vacation.*

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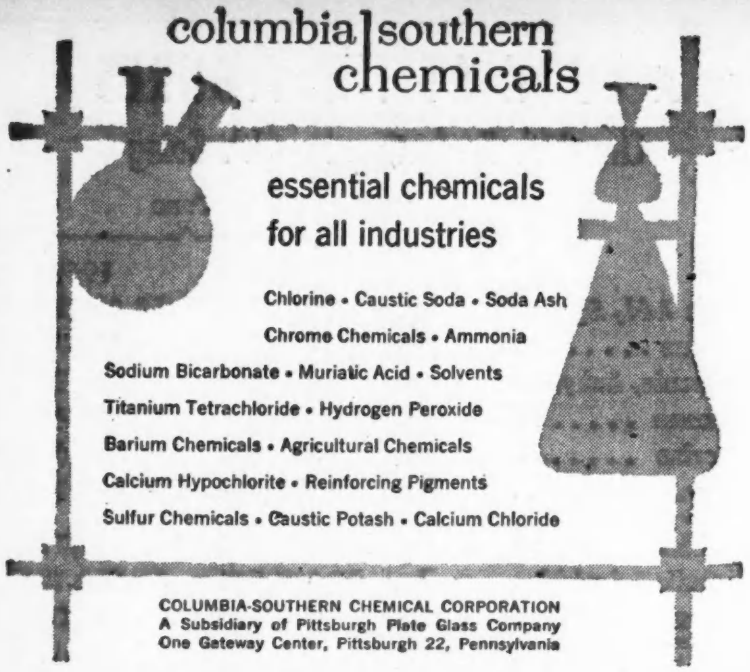

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# Heavy Chemicals

Soapers are back in business, with vacation shutdowns over, clamoring for stepped-up shipments of sodium sulfate. Customers already under contract report they are able to get the extra material, but new accounts are increasingly encountering thumbs down from major producers as the squeeze undergoes successive turns of the screw. Spot lots have become scarce to the vanishing point, trade sources advise, adding that happily, regular customers, at least as yet, are not being put on allocation.

What ails steel? The question is honed sharper these days by the increasing activity in steel-using industries, the approaching start-up of new car production, the continuing brisk pace of stainless steel operations. The only answer is that users must have stacked their warehouses blue in the face both before and after the strike. If this seems incredible, trade sources argue, how else explain the fact that steel industry sources are talking of a sustained low operating rate during the fourth quarter while all the rest of industry has in mind an open-throttle season?

Acid business has found itself able to sail pass Pittsburgh's roadblock, not without scraping the bar a little, but with no floundering or backtracking either, sources in the trade say. Hydrochloric has run into a fair rate of business in its food processing and oil well-acidizing outlets. Hydrofluoric has been emboomed by a heady aluminum business, and nitric has profited from the paradox of brisk stainless steel operations amid Pittsburghs otherwise notable lack of bestirment.

Effective September 1, the price of technical lead dioxide powder was advanced to 65 cents a pound in 25-pound fiberboard boxes, 55 cents for less than 2,000 pounds packed in 200-pound fiber drums, and 50 cents for quantities of over 2,000 pounds. There were no changes in f.o.b. points or shipping terms.

Late in the week it was announced that magnesium chloride and potassium bromate would be advanced October 1 to contract customers and immediately on spot. The rise in magnesium chloride amounts to 25 cents to 52 cents per hundredweight, and that in potassium bromate of 1½ cents a pound across the board.

The American Paper and Pulp Association reported production for the week ended August 7, at 92.1 percent of theoretical capacity, as compared with the revised figure of 92.4 percent for the previous week and 95.4 percent for the corresponding week of last year.

## Acids

**Hydrochloric**—The downturn in steel has hurt this year's volume, but much of the slack has been taken up by a fair rate of business in food and petroleum outlets. The acid is used extensively in food processing and oil well acidizing. Business in chemical outlets has been without feature, but hasn't totaled up badly, sources in the trade report.

**Hydrofluoric**—Trade sources as well as market reporters are said to be growing weary of repeating the same report of qualified summer doldrums. The qualification of course comes by way of the aluminum industry which apparently is stockpiling material against the prospect of an everlasting boom.

Everybody is hoping and a majority are expecting that the economy will be off its haunches and runninug hard during the fourth quarter. If steel continues to lag during that quarter, well, too bad. It will only mean that users have the material stockpiled higher than observers had thought possible. Because: Steel is certainly being used now and will be used in considerable volume during the fall when new model auto production is in full swing. And it must be coming from somewhere: If not from Pittsburgh, then out of amply-filled warehouses.

**Nitric**—Reports from the trade have it that stainless steel operations have paradoxically held up very well notwithstanding the disheartening continuing downturn of steel output. This has saved the nitric acid market from acute doldrums which would have set in from the hiatus of fertilizer production.

**Sulfuric** — Pricing remains as was: Shaded in the northeast, at list elsewhere. It's a matter of some gratification to trade sources that Pittsburgh's quiescence hasn't caused an intensification of such competitive shading in the northeast.

From American Iron & Steel Institute comes an estimate that steel output last week totaled 1,533,000 net tons, or 53.8 percent of capacity as against an actual total of 1,547,000 tons or 54.3 percent of capacity during the preceding week.

For perspective, the Institute reports output a month ago of 1,537,000 net tons; and a year ago, when the great strike was in full swing, at 332,000 tons.

The index of production last week was estimated at 95.4 percent of capacity, as compared with the previous week's 96.3 percent, and 95.7 a month ago. The index is based on production during the years 1947-1949.

### Price Trends

**Advanced**
None

**Reduced**
None

**Comparative Price Indexes**
(100—1949 average)

| Last week | Prev. week | Last month | Sept. 4, 1959 |
|---|---|---|---|
| 106.81 | 106.81 | 106.81 | 107.13 |

*For Current Prices see page 9*

## Bases and Salts

**Aluminum Sulfate**—Competitive around northern New Jersey, steady elsewhere—that's still the word on alum pricing.

Business, which ran fairly well all summer owing to the brisk pace of paper industry activity, is getting an additional boost now with the re-opening of chemical plants that had been shut down for vacation.

**Caustic Soda**—Soapers are starting to climb back in the saddle, joining the paper makers—who have been active all summer. All told, the market is in pretty good shape, considering that this has really been chlorine's year as far as the caustic-chlorine co-product rivalry is concerned.

**Lead Dioxide**—Effective September 1, the price of technical lead dioxide powder was advanced to 65c. a pound in 25-pound fiberboard boxes, 55c. for less than 2,000 pounds packed in 200-pound fiber drums, and 50c. a pound for quantities of over 2,000 pounds. There were no changes in f.o.b. points.

**Lime**—Bureau of Mines has issued a revised report on lime sales in June. Highlights are as follows:

Domestic sales of open-market lime totaled 870,233 tons for the month, down slightly from May's 895,422 tons, but well ahead of last June's 624,393.

The June total included 686,045 tons of quicklime and 184,188 tons of hydrated.

By uses, the breakdown was 12,210 tons of agricultural lime, 106,517 tons of construction material, 537,506 of chemical and other industrial grades and 214,000 tons of refractory lime (dead-burned dolomite). The figure for construction lime showed an advance from May, but decreases were experienced in agricultural, refractory and chemical and other industrial limes.

**Magnesium Chloride** — Effective immediately on spot and October 1 on contract this material is being advanced by 25 cents to 52 cents per hundredweight, depending upon grade. The boost reflect higher costs of production.

**Soda Ash**—Factory shipments and production of machine-made glass containers during July, 1960 totaled 12,762,000 and 14,185,000 gross, respectively, Bureau of the Census reports.

## Nonferrous Metals

**Aluminum**—Net shipments of aluminum sheet and plate totaled 121,215,000 pounds in July, down a mite from the 127,216,000 pounds shipped the preceding month, the Aluminum Association reports. The total included 107,431,000 pounds of non heat-treatable material 13,784,000 pounds of heat-treatable.

Shipments of aluminum in foil lamination during the month totaled 18,003,-

## Heavy Chemicals

505 pounds, as compared with 18,894,000 pounds in June, the Association notes.

Total sheet and plate shipments for the first seven months of the current year stands at 821,423,000 pounds. Foil shipments (aluminum content) totals 130,340,002 pounds for the same period.

Production of primary aluminum in June totaled 171,356 short tons, the Mines Bureau reports. This represents a decline of 3 percent from May. Total output for the half-year was reported by Mines to be in excess of one million tons.

Shipments in June were 21,000 tons below production and down 10 percent from May. Stocks increased from 112,000 tons as of the end of December, 1959, to some 170,000 tons as of the close of June, 1960, Mines notes.

**Mercury**—Price range was unchanged at $209 to $212 a flask, for large lots, prompt shipment; in a quiet market.

**Silver**—Price has stood as a tower of strength at 91⅜c. a troy ounce, spot, for over a year.

**Tin**—Market was steady and fairly active, with prices closing Friday at $1.03 a pound, spot, up 1c. from a week ago.


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## Crown Zellerbach Names Two To Step Up Research Effort

Crown Zellerbach Corporation recently elected Dr. W. M. Hearon to fill the newly-created post of vice-president of research and development. He was previously general manager of the firm's chemical products division. Dr. Hearon will move to corporate headquarters at San Francisco where he will report directly to senior officers of the company.

In a related move, Dr. John S. Barton has been elevated to director of research in charge of the central research division in Camas, Wash.

Crown Zellerbach recently started operations at a major sulfoxide facility in Bogalusa, La. Capacity of the unit is rated at 5 million pounds a year.

## *Drug Counterfeiter*

*—Continued from page 3*

rothiazide tablets) and "Hydrodiuril" (hydrochlorothiazide tablets).

Asking for seizure and condemnation of the firm's stock of bogus pills, FDA contends that the three pharmaceuticals are "new drugs" and were used to fill prescriptions without an approved new drug application.

FDA officials seized two 500-tablet bottles labeled "Merck Sharpe & Dohme" tablets for heart disease—one of "Diuril" and one of "Hydrodiuril."

No "Miltown" was taken, and agency spokesman points out because there were no stocks of the tranquilizers in the store at the time of the raid.

The products seized were not manufactured by the maker, Merck Sharpe & Dohme Division of Merck & Co., but carried the firm's brand markings.

The agency said cryptically that it is continuing its investigation into the matter.

The Washington crackdown follows a similar exposure by New Jersey health and police officials in July of another drug counterfeiting operation: General Pharmacal Company, in Hoboken, N. J.

Commenting on the FDA action, Dr. Austin Smith, president of the Pharmaceutical Manufacturers Association, told OPD that this is another fine example of alert coverage of a situation which might have otherwise been of serious consequence to both health and property rights.


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## Feldspar Producers Are Seen Unhurt by Nepheline Syenite

Though nepheline syenite has been brought into this country from Canada at less than fair value, it is not likely to hurt domestic producers of competing feldspar. So ruled the Tariff Commission last week.

Nepheline syenite is not produced in the United States, but vies with domestically-produced feldspar in certain regions for customers, particularly in the glass industry.

According to the commission, "Determination of sales at less than fair value was based solely on the pricing policies of the two Canadian exporters in which they quoted their nepheline syenite in dollars and accepted in payment Canadian dollars from the Canadian purchasers and United States dollars from the United States purchasers without regard to the prevailing exchange rates of the two currencies."

The commission found "no evidence of predatory or systematic dumping involved" in these pricing policies. In fact, it discovered that the pricing policies of the two Canadian companies had a long history and had been "in existence through wide variation of US-Canadian exchange rates."

What's more, the policies have since been changed. If domestic feldspar producers suffered any injury, the commission feels it was "inconsequential." Under the new pricing policies, it adds, no injury is likely to the US industry.

## Hooker Begins Production Of Four Organophosphites

Hooker Chemical Corporation, Niagara Falls, N. Y., has begun full-scale commercial output of four organophosphites to meet growing demand from the plastics, paint and chemical processing industries.

The materials, useful in stabilizer systems for polyvinyl and polyolefin resins, are triphenyl phosphite, diphenyldecyl phosphite, phenyldidecyl phosphite and tridecyl phosphite. The first named material is being used by Hooker as an intermediate for synthetisizing diakyl, diaryl, alkylaryl and trialkyl phosphites as well as organosphosphates, thiophosphites and phosphonates.

Hooker recently (April 1, 1960) put into effect price reductions of 22 percent on triphenyl phosphite and 12 percent on diphenyldecyl phosphite packed in 55-gallon drums for truckload shipment.

## *Cyclics, Acyclics*

—*Continued from page 4*

cent), cumene (20 percent), phthalic anhydride (19 percent), cyclohexane (17 percent), and naphthalene (17 percent). Production of dodecylbenzene in 1959 was only sligtly smaller than in 1958.

In the commission's preliminary report on cyclic intermediates, statistics on the production of ortho-xylene (62 million pounds in 1959) are given for the first time.

Complete statistics will be given in the commission's final report on production and sales of synthetic organic cemicals in 1959, which will be issued later this year.

US production of miscellaneous chemicals in 1959 was almost 30 billion pounds, or 10.7 percent more than the output of 27.1 billion pounds reported for 1958. Sales amounted to 13.4 billion pounds, valued at $2.0 billion, compared with 10.9 billion pounds, valued at $1.6 billion, in 1958.

Total output of miscellaneous cyclic chemicals in 1959 was 753 million pounds, or 8.3 percent more than the output of 695 million pounds reported for 1958. Sales in 1959 totaled 453 million pounds, valued at $136 million, compared with 427 million pounds, valued at $128 million, in 1958. The most important subgroup of cyclic compounds was the lubricating oil additives, the output of which was 378 million pounds in 1959.

Total production of miscellaneous acyclic chemicals in 1959 was 29.2 billion pounds—10.6 percent more than the output of 26.4 billion pounds reported for 1958. Sales in 1959 totaled 12.9 billion pounds, valued at $1.8 billion, compared with 10.4 billion pounds, valued at $1.5 billion, in 1958.

Individual chemicals the output of which exceeded 1 billion pounds in 1959 were synthetic methanol (1.8 billion pounds, compared with 1.4 billion pounds in 1958); formaldehyde (1.8 billion pounds, compared with 1.4 billion pounds); ethyl alcohol (1.6 billion pounds, compared with 1.5 billion pounds); ethylene oxide (1.4 billion pounds, compared with 1.2 billion pounds); urea (1.3 billion pounds, compared wtih 1.1 billion pounds); ethylene glycol (1.2 billion pounds, compared with 1.1 billion pounds); acetic anhydride and isopropyl alcohol (each 1.1 billion pounds, compared with 1.0 billion pounds); and dichloroethane (1.1 billion pounds, compared with 0.8 billion pounds).

## Vitro Gets Gov't Assistance On a New Beryllium Project

Vitro Minerals Corporation, New York, has signed an exploration loan agreement with the Office of Minerals Exploration of the Department of the Interior for conducting exploratory work on its new beryllium property in the Topaz Mountain area of Jaub County, Utah.

Vitro, a subsidiary of Vitro Corporation of America, announced the discovery of a deposit of new beryllium ore in Utah on June 21, 1960. Drilling tests indicated a substantial deposit. Processing development is now under way at the parent company's laboratories.

The loan is the first one made by the minerals exploration office under the recent change in regulations through which exploration for beryllium minerals other than beryl is now eligible for government assistance.


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## Additives Law Petitions Keep Coming in to FDA

Food & Drug Administration has announced receipt of five new petitions under the food additives law. Filing petitions are:

Griffith Laboratories, Inc., Union, N.J., seeking a tolerance of 200 parts per million (0.02 percent) of monoglyceride citrate in antioxidant formulations for fats.

Kelco Company, San Diego, Calif., asking for a regulation to provide for the safe use of propylene glycol alginate in confectionery.

Atlas Powder Company, Wilmington, Del., requesting a rule to provide for the use of polyoxyethylene (20) sorbitan monostearate and sorbitan monostearate in coatings for cookies and confectionery at levels not to exceed 0.5 percent for polyoxyethylene (20) sorbitan monostearate alone, 1.0 percent for sorbitan monostearate alone, or 1.0 percent total when both are used.

Central Soya Company, Chicago, seeking a regulation to provide for the safe use of hydroxylated lecithin in food.

Corn Industries Research Foundation, Washington, requesting a rule to provide for the safe use of oxidized starch as a component of food and as a sizing or coating for food containers.

Hagan Chemicals & Controls, Inc., Pittsburgh, Pa., has withdrawn its petition proposing the issuance of a regulation to permit the use of octadecylamine at levels of not more than 3.0 parts per million (0.0003 percent) in steam.

## Phosphatic Fertilizer Units Are Due to Go Up in Morocco

Two new phosphatic fertilizer plants are due to go up near Safi, Morocco, according to the Business & Defense Services Administration.

The Moroccan government has signed an agreement with the Royal Dutch Shell group for the construction of a 110,000-ton ammonium phosphate installation.

Bureau d'Etudes et de Participations Industrielles has submitted specific plans to US and European construction firms for the erection of a concentrated or triple superphosphate facility.

Eventual annual capacity will be 200,000 tons of triple superphosphate. Units to produce sulfuric and phosphoric acids will be included.

Raw material for the two phosphatic fertilizer plants will be Morocco's own phosphate rock. A major producer of phosphate rock, primarly for export, Morocco turned out 3.6 million metric tons during the first half of this year.

The two fertilizer plants mill market their output both domestically and abroad.

## Thiokol Heading Group On Air Force Missile Study

The Air Force Flight Test Center, Edwards Air Force Base, Calif., has awarded a $500,000 contract to a group of companies headed by Thiokol Chemical Corporation for study of sound propulsion system data.

The companies working with Thiokol are Allison division of General Motors Corporation; Linde Company, a division of Union Carbide Corporation, and Nuclear Development Corporation.

The basic objective of this study is to provide sound propulsion system data to contractors considering nuclear rocket propulsion from a mission stand point under system requirement studies, Thiokol reports.

Work at the Thiokol organization will be carried out at its Nuclear Development Center at Troy Hills, N.J.

## *NACA Picks Speaker*

*—Continued from page 7*

and the relationship of pesticides to both agricultural production and public health.

The NACA conclave will open on the morning of September 27 with an address by the association's president, Jack V. Vernon, vice-president of Food Machinery Chemical Corporation, New York.

The group then will hear Dr. Hardin B. Jones, assistant director of the Donner Laboratory of Medical Physics of the University of California, Berkeley, whose topic will be "The Reasonable and the False Issues of Carcinogenicity."

He will be followed by Dr. Alfred M. Boyce, director of the University of California's citrus experiment station at Riverside, who will speak on the safety of pesticide chemicals.

The importance of pesticides to world health programs will next be covered by Dr. Henry van Zile Hyde, chief of the division of international health in the Public Health Service, Washington.

Following the luncheon session, the group will hear a panel discussion on the subject of "Public Relations in the Sixties." Moderated by Jack Dreessen of the NACA staff, the panel will include:

**Makeup of Public Relations Panel**

George K. Johnson of Monsanto Chemical Company, St. Louis, Mo., who will speak on industry's public relations responsibilities.

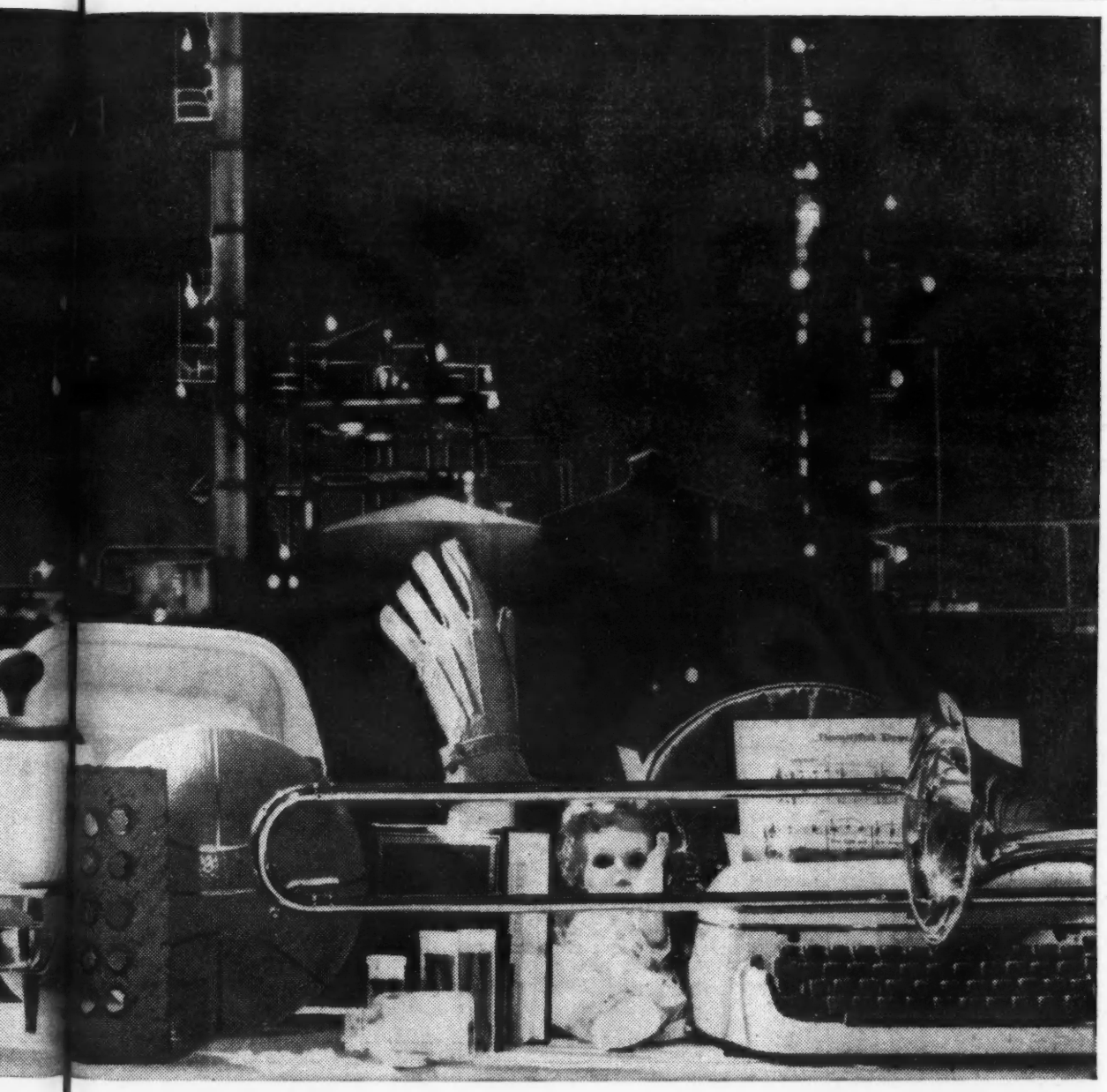
Wally Erickson, radio farm director of Station KFRE in Fresno, Calif., who will cover the aspects of disseminating agricultural news to the public by radio.

Jack T. Pickett, editor of the *California Farmer*, San Francisco, who will present the views of the agricultural press on how to mold public opinion.

Donald G. Lerch, jr., of Washington, who will outline the importance to industry of planned public relations programs.

The program for the first day concludes with a reception and water show for association members and their guests.

NACA's annual golf tournament and banquet are scheduled for the second day of the convention. Committee meetings and other business will be held on the third and final day.

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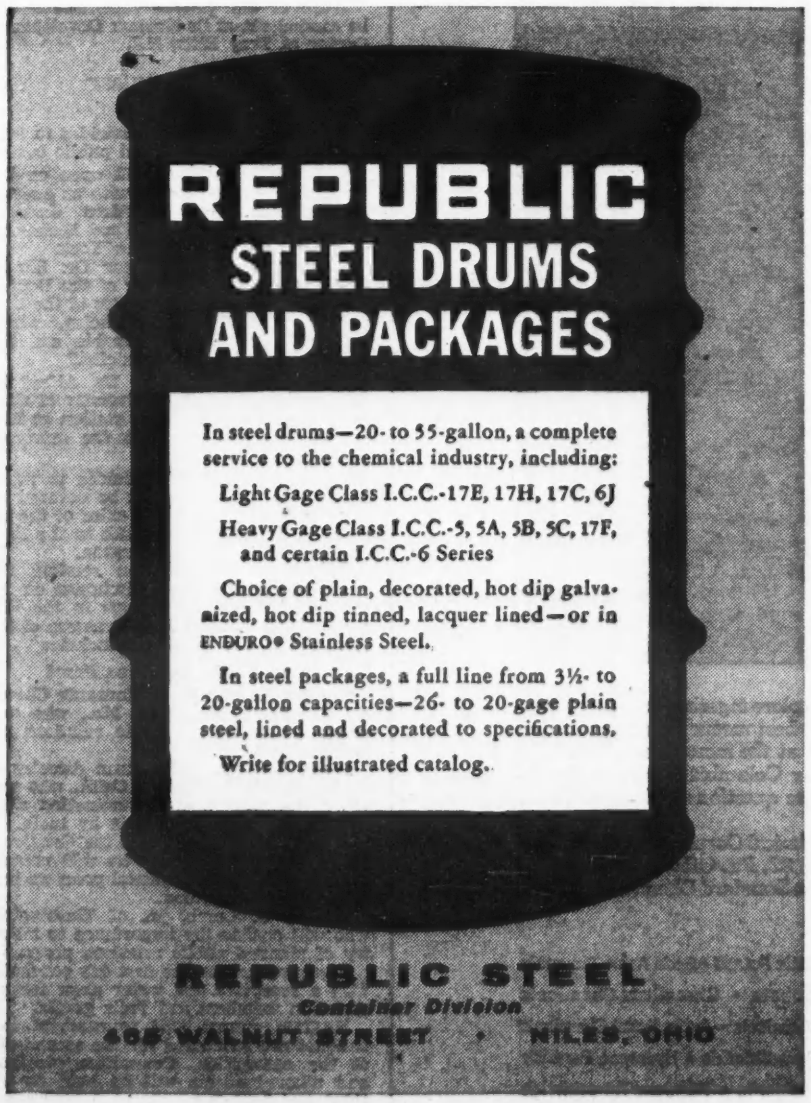
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## Texaco Advances Eppley; King, Halsell Also Move Up

Texaco, Inc., has elected Marion J. Eppley, jr., to the post of senior vice-president in charge of world-wide sales. Mr. Eppley was formerly vice-president and assistant to the chairman of the board.

Named to fill the latter post is Kerryn King, who was previously vice-president in charge of the employee and public relation department.

Ben Halsell, formerly director of advertising and sales promotion has been named to fill Mr. King's former post. Mr. Eppley succeeds the late Harris T. Dodge.

## Monsanto's Martin Retires, Served Lion Oil 31 Years

To M. Martin, vice-president and director of Monsanto Chemical Company and president of the Lion Oil Company Division, has retired after thirty-one years of service.

Mr. Martin joined Lion Oil in 1929 as vice-president and director, became executive vice-president in 1939 and president in 1947. When Lion merged into Monsanto in 1955, he assumed his vice presidency and directorship. He has served on the parent company's executive committee since March, 1958.

## *Business Better*

*—Continued from page 5*

increased capital expenditures. The largest group, 39 percent said they had no intention of spending any more or any less than they did in the first half of the year. The next group, 35 percent, said they were cutting back on their second-half expenditures. The remaining 26 percent indicated that they will definitely be spending more for capital improvement in the second half than they did in the first half of 1960.

**Commodity Prices**

The downward price slide has apparently stopped. This month, only 8 percent report lower prices as compared with 13 percent so reporting last month; 11 percent say prices have firmed, compared with 5 percent in July. But, the large majority, 81 percent, say the price situation is unchanged, with keen competition prevailing and a continuation of the opportunity to negotiate good deals.

**Purchased Materials Inventories**

Liquidation of inventories of purchased materials continues to be one of the objectives of purchasing executives. While many of them appear to be satisfied with their present levels, there are still quite a few who are continuing to reduce their stocks on hand. Actually, 41 percent say their inventory levels were further lowered in August. Only 13 percent tell of increases. Some of this minority group pointedly admit they anticipate price increases and are hedging. The remaining 46 percent indicate no change.

**Employment**

The gradual stopping of auto production on 1960 models, plus other seasonal factors, has not helped the employment situation in August. In fact, those reporting increases in their rolls dropped to 14 percent from 18 percent in July. But, the number saying their employment is worse also dropped, from 28 percent in July to 22 percent in August. This leaves 65 percent with no change. While, for some, reductions in employment are the result of new labor saving methods and equipment, the majority point out that a change in business conditions could quickly alter their reports.

**Buying Policy**

It is beginning to sound like old chestnuts, but the ready availability of almost all items, a static price situation and an unenthusiastic consumer demand for goods has not inspired any rush to stockpile. Purchasing executives say they will continue to hold forward commitments to a minimum until they can see a longer-term upswing in general business conditions.

| | *Percent Reporting* | | | | |
|---|---|---|---|---|---|
| *August* | *Hand to Mouth* | *30 Days* | *60 Days* | *90 Days* | *6 Mos. to 1 Yr.* |
| Production Materials | 40 | 40 | 34 | 11 | 5 |
| MRO Supplies..... | 29 | 47 | 18 | 4 | 2 |
| Capital Expenditures. | 12 | 7 | 9 | 25 | 47 |
| *July* | | | | | |
| Production Materials | 7 | 39 | 38 | 14 | 2 |
| MRO Supplies..... | 28 | 45 | 21 | 5 | 1 |
| Capital Expenditures. | 9 | 8 | 12 | 26 | 45 |

**Specific Commodity Changes**

While there is some indication of price strengthening in specific items, there is no evidence of any general upward price movement. The change in scrap prices from last month is interesting.

On the up side are: aluminum, scrap steel, sugar, some steel alloys, gasoline, high grade oils, burlap, electrical insulators, rosin and linseed oil.

On the down side are: Lumber, crude rubber, some electrical equipment items and polyethylene.

In short supply are: Maleic and phthalic anhydrides.

## Avisco Increases Output Of Its Coated Cellophanes

American Viscose Corporation, Philadelphia, has increased production of its polymer resin coated cellophane, "Avisco RS" by more than 50 percent to meet increased demand from packagers.

Four varieties of the film are now available: "300 RS-1" at 79 cents a pound; "300 RS-2" at $.0405 at thousand square inches; 450 gauge "RS-2" at $.0564 and 600 guage "RS" at $.0733 per thousand square inches.

The company operates two film plants, one at Fredericksburg, Va., and the other at Marcus Hook, Pa. Its four distributing centers are located at Atlanta, Ga.; Chicago; Dallas, Tex., and Los Angeles.

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# Obituaries

**Roy G. Hemminghaus**

Roy G. Hemminghaus, vice-president of new planning for Chemstrand Corporation, died August 25 in Ridgewood, N.J. He was fifty-two years old.

Mr. Hemminghaus joined Chemstrand in 1950 after completing twenty years of service with Monsanto Chemical Company. During his ensuing career with the Decatur, Ala., company, he served as plant manager at its Pensacola, Fla., nylon plant; as vice-president and general manager of manufacturing, and as vice-president of staff services.

**Albert M. Pitcher**

Albert M. Pitcher, former vice-president of Westvaco Chlorine Products Company, which has since become a division of Food Machinery & Chemical Corporation, died August 29 in Landgrove, Vt.

Mr. Pitcher was associated with E. I. duPont de Nemours & Co. from 1911 to 1917, when he joined the chemical warfare service. For many years he was in charge of production for Westvaco.

**Herbert F. Hinners,** a chemical engineer for Lever Brothers Company, died August 29 in Chicago. He was forty-nine years old.

**George S. Thornhill,** a New York district sales manager for Abbott Laboratories, North Chicago, Ill., died August 28 in Scarsdale, N.Y. He was sixty years old.

**Dr. Martin D. Whitaker,** president of Lehigh University and a leading nuclear physicist, died August 31 in Bethlehem, Pa. He was fifty-eight years old.

## *Petrochemical Plants*

*—Continued from page 4*

ing for gasified carbon materials. The resultant products will go into a wide range of chemicals and plastics. Among them: polythylene, polypropylene, and polystyrene.

Dow has agreed to purchase a new issue of Unquinesa stock with a par value equal to the presently-issued stocks. This amount to Dow's buying a half-interest in the Spanish company. As a result, the firm will probably change its name to Dow-Unquinesa S.A.

Approval for the joint project has already been secured from the Spanish government. Unquinesa will hereafter be entitled to technological know-how and engineering and marketing assistance from Dow.

Headquarters for Unquinesa as well as for the joint operation are at Bilabo. Location of the petrochemicals complex is not revealed. Neither is any information given as to capacity or cost.

Trade observers agree that Spain is eager to have a nearby source of the raw petroleum. Thus, they note, the decree conceding oil rights to Sohio and Tidewater specifies that the Spanish market is to have first call on a percentage of whatever oil is available.

The exploration area lies not far from the Moroccan border, on the other side of which oil was recently discovered by ENI, the Italian government-owned monopoly, which is also exploring under concession from Spain.

A privately-owned Spanish bank—Banco Urquijo—holds an option to deal itself in on as much as 20 percent of the Sahara operation at any time by paying its share of costs.


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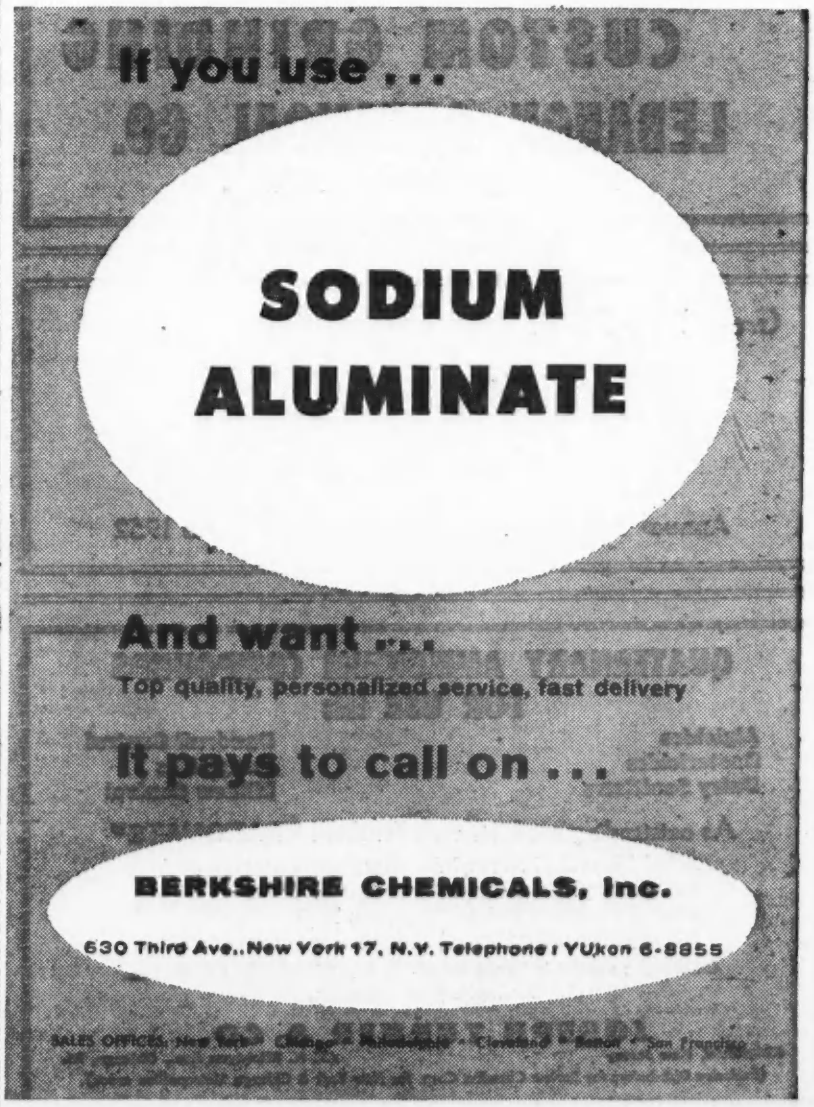
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# Agricultural Chemicals

The market for most agricultural chemicals continued to be on the routine side this week. Fertilizer producers are waiting out the end of summer for the return of fall planting to spark lagging demand. The only price change reported for the week is in regard to muriate of potash. As of September 1, the listing for this potash salt went from 33 cents per unit to 34 cents per unit on bulk shipments contracted before July 1. Both grades of granular, special and coarse, are at 35 cents per unit.

Plans for the construction of a new triple-superphosphate plant for the port of Sfax, Tunisia, have been announced The new plant, to be constructed by a Swedish contracting firm, is part of a national step to convert Tunisia's economy into an industrial one.

According to reports, the new plant will have an initial capacity of transforming 170,000 tons of phosphate rock into 100,000 tons of triple-superphosphate annually. Cost of the plant has been estimated at $16 million. The only existing plant for the production of triple-superphosphate is also at Sfax.

Value of factory shipments from the fertilizer industry in Canada reached a record $96,278,300 in 1959, an increase of 8 percent from the $89,145,800 in 1958 and 4 percent above the previous high of $92,498,800 reported for 1955.

Fertilizer use on many crops is below the level that would be most profitable for most farmers, according to a report from the US Department of Agriculture. According to the department's farm economics research division, projected crop production can be met more economically through the use of more fertilizer and fewer acres than are represented by the present fertilizer-land use ratio.

The report states that increased fertilizer use has played a major part in meeting production needs in lowering unit costs of production. The farm economists feel that most farmers who have adequate resources can improve their incomes substantially through higher rates of fertilizer application.

This seems to be the case in Western Europe, where on the basis of acres of agricultural land, more than four times more fertilizer is used than in the United States. So reported the chief agronomist of the National Plant Institute. He notes that in the US, the average fertilizer application per acre is about 12 pounds for its 1.1 million acres. In Western Europe the ratio is 49 pounds of plant food per acre for its 368 million acres of farmland.

Farm income declined substantially in the US in 1959, reports the USDA. Decreases in farm income were also reported for the corn belt states. After allowing for changes in farm inventories, total net farm income per farm in the US fell from $2,952 to $2,548, a drop of 13.7 percent. It is stressed by the department, that 1958 was an exceptionally good year for farm income in many respects, and the 1959 income was above that of 1954 through 1957 for the US.

### Price Trends

**Advanced**
None

**Reduced**
Muriate of Potash, 1c. per unit $K_2O$

**Comparative Price Indexes**
(100—1949 average)

| Last week | Prev. week | Last month | Sept. 4, 1959 |
|---|---|---|---|
| 109.97 | 109.97 | 109.97 | 111.14 |

*For Current Prices see page 9*

## Animal and Plant Foods

**Ammonium Nitrate**—Listings are not scheduled for change until October 1. At that time the current price of $64 per ton will go to $67 per ton. Market conditions are described as quiet, with a pickup in activity anticipated in September.

**Animal Proteins**—Quotations for fishmeal and scrap are unchanged from their recent low of $94 to $92 per ton, bagged on both Atlantic and Gulf coasts. Fishscrap is quoted at its usual $4 per ton lower listing than fishmeal, same basis. While production of fishmeal and scrap is reported to be at fair levels, the market continues to be very quiet.

**Phosphate Rock**—Phosphate rock sold or used in the US during 1959 set a new record, according to reports released by the Bureau of Mines. Mine production of phosphate rock ore increased 6 percent to 49.2 million pounds. Crude ore output in Florida and the Western states was 6 and 34 percent higher than in 1958, but in Tennessee it dropped 10 percent. Total marketable output also reached a new high, 7 percent above that for 1958. Increases were noted in Florida and the Western states.

Sales and use of phosphate rock gained 9 percent. Florida and the Western states had gains of 11 and 14 percent, respectively, while Tennessee dropped 8 percent. Apparent consumption was over 13 million tons, or 8 percent above 1958.

Phosphate rock imports increased 29 percent, compared with the previous year. Imports originated from Curacao (83 percent), Mexico (10 percent), and Makatea Islands (7 percent). The rock from Curacao and Mexico was low-fluorine material, used for animal feed supplements. US exports, as reported to the Bureau of Mines by domestic producers, were 13 percent higher than in 1958.

Estimated world production of phosphate rock increased 5 percent in 1959.

**Potash Salts**—The new September-October listing for standard muriate of potash calls for a price of 34 cents per unit $K_2O$ in bulk shipments contracted before July 1. Bulk shipments of special granular and coarse granular are 35 cents per $K_2O$, same contract basis. For material packed in 100 lb. bags, coarse granular, the new price is $26, or 60 cents higher than the July-August listing.

Listings for sulfate of potash remain 62.5 cents per unit, 50 percent $K_2O$, in bulk, until October 1 when listings call for a 5 cent per unit increase.

On tonnage contracted for after June 30, the listings call for increases of 2 cents per unit in bulk and $1.20 per ton in bags for both muriate and sulfate of potash.

**Urea**—According to Tariff Commission reports, total primary production of urea (on a 100 percent urea basis) totaled 82,487,281 pounds in June, as against 71,326,153 pounds in the previous month.

## Pesticides

The US Tariff Commission has released its preliminary report on US production and sales of pesticides and other organic agricultural chemicals in 1959. According to the report, US production of pesticides and other organic agricultural chemicals in 1959 amounted to 585 million pounds, about 9 percent more than the 539 million pounds reported in 1958. Sales in 1959 were 502 million valued at $225 million, compared to the 467 million pounds, valued at $196 million in 1958.

The output of cyclic pesticides and other chemicals included in the cyclic group amounted to 469 million pounds in 1959 or 5 percent more than the 445 million pounds produced in 1958. Sales in 1959 were 410 million pounds valued at $172 millions. The chemical in this group which was produced in the greatest quantity in 1959 was DDT. DDT production in 1959 amounted to 157 million pounds, a record high.

Production of acyclic pesticides and other acyclic organic agricultural chemicals in 1959 amounted to 116 million pounds as against 95 million pounds in the previous year. Sales in 1959 were 93 million pound, at a value of $52 million.

### Pesticides Output

Following are production statistics reported by the Tariff Commission representing the number of pounds of certain pesticides produced during June, 1960, with May's production figures supplied for comparison:

| | Pounds | |
|---|---|---|
| | May 1960 | June 1960 |
| DDT | 13,748,170 | 12,444,458 |
| 2,4-D* | *3,890,464 | *3,274,368 |
| Ester & Salts | *2,903,125 | *3,719,501 |
| Acid equivalent | *2,679,081 | *2,759,454 |
| BHC | 3,859,314 | 1,520,520 |
| Gamma isomer | 724,330 | 510,419 |
| 2,4,5-T | *613,763 | *617,723 |

* Partly estimated.

# Aliphatic Organics

The ½ cent a pound reduction in the tankcar price of furfural, to 11½ cents a pound Eastern delivery, on August 25, apparently was motivated by considerations more far-reaching than "lower freight rates on tankcars to certain destinations." This is, of course, the way the sole US producer of the chemical tells the story and while it is doubtlessly true, the thread of the tale, as some people see it, is also interwoven with these factors: The end of adiponitrile production at Niagara Falls, N. Y., late in 1962. The construction of a caprolactam plant at Beaumont, Tex. The three-way battle between rayon, nylon-6, and nylon-66 for the lucrative tire cord market. The intra-trade fight between nylon-6 and nylon-66. And the drop in imports from the Dominican Republic, now facing economic sanctions.

As immediately seen, the story has many ramifications. And until Thursday last, to draw conclusions was to go to the end of the limb. At that time, however, confirmation was received that a major producer of nylon-66 was, in fact, discontinuing the manufacture of adiponitrile—in which furfural, in this instance, was the starting material—at its Niagara Falls chemical complex.

The firm also disclosed that it was planning to switch completely to the butadiene-ADN route to nylon. This process, reportedly, is considerably cheaper than the furfural-ADN route which is used at Niagara Falls.

With this information to go on, it is easy to assign motives for the reduction in the price of furfural. Obviously, the producer of the chemical, looking to the time when its nylon business is no more, wishes to speed-up research and development work via the more attractive price. Secondly, it may feel that with a lower-priced product, it will be better able to compete with imports from the Dominican Republic, which too soon will be offering its furfural to other than the nylon-66 manufacturer, with whom it has had an exclusive contract. That is, unless the US government places an embargo on goods from that country. This is quite likely.

**Furfural**—The analysis. Imports of furfural come from the Dominican Republic exclusively, under contract to a nylon-66 producer. These were 29.5 million pounds in 1957, 28.4 million pounds in recession-ridden 1958, and a whopping 40 million pounds in 1959. In the first half of '60, however, the figure dropped to 16 million pounds, valued at $1.5 million, down 30.9 percent in volume and 31.4 percent in value from the corresponding period a year ago.

Because only one of the two nylon-66 producers uses furfural as a starting material to hexamethylene diamine and thence to nylon, it is easy to understand how a price advantage could be gained by contracting with a foreign supplier. For example, in 1959, the average price paid Trujillo-land for furfural was 10½c. a pound. And this compares quite favorably with the 12c. a pound tag on domestic material (whether a large contract customer pays this much, though, is not readily ascertainable).

It seems unlikely that the nylon-66 producer would give up this foreign supply source unless the price being asked was out of line with its domestic competitor. And obviously it hasn't been. According to the Census bureau, May imports of furfural totaled 3,564,748 pounds and were valued at $337,838 or 10½c. a pound.

The significant drop in imports was the first clue that the firm intended to concentrate on its butadiene process and make a slow but graceful departure from the furfural market.

The next and related point. Is the firm getting into nylon-6? Indications are it is. Midway, through 1961, it is expected to have its caprolactam plant on stream at Beaumont, Tex. And though it could divert its 50 million pounds of capacity to several end-uses, it is likely, once again, that nylon-6 will ultimately figure among them. At least, that's the way some market appraisers see it.

Of course, it would not be particularly new or startling if a chemical producer suddenly started turning out competitive products, either independently or through a subsidiary or joint venture. In fact, if anything, it sometimes seems like an economic necessity.

If the firm does join the growing ranks of nylon-6 producers—who are waging a real knock-down, knock-out public relations fight—the requirement for nylon-66 may be decreased proportionately.

The way things look now—or maybe it's all due to clever propaganda—nylon-6 could one day dominate the tire cord market. This possibility might be enough inducement to get in the business or at the very least set nylon-66 producers in search of the cheapest possible manufacturing process to buck the competition on the single most important element in a sale: Price.

Besides nylon, furfural has several other applications which are described by a trade source as multi-million pounders. These are: as a selective solvent in the refining of lubricating oil; the extractive distillation of phenolic resins; the manufacture of wood rosin; and the decolorizing of wood rosins. Added to these, are many miscellaneous uses of less than a million pounds yearly apiece.

There is only one US producer of furfural. Its sole competitor for the US market is a firm which it licensed and helped start up several years ago, whose facilities are located in the Dominican Republic. Furfural is produced abroad, however, in Spain, Portugal, France, Japan, and Argentina. France, for example, is said to turn out some 5 million pounds a year, all of which is used locally.

US exports supplement the limited production abroad. But while reported to be quite substantial, the foreign market coupled with domestic applications, probably won't be able to soak up the excess

### Price Trends

**Advanced**

Oxalic acid, l.c.l., ¾c. to 1¼c. per lb.

**Reduced**

Vinyl acetate monomer, tanks, 1.9c. per lb.

**Comparative Price Indexes**

(100—1949 average)

| Last week | Prev. week | Last month | Sept. 4, 1959 |
|---|---|---|---|
| 131.20 | 131.22 | 132.09 | 130.53 |

*For Current Prices see page 9*

### Organic Chemicals Output: June

The following figures, in pounds, represent output of specified organic chemicals in May and June, 1960, as reported by the Tariff Commission.

| | June | May |
|---|---|---|
| Acetic Acid: | | |
| Synthetic | 63,710,346 | 65,103,410 |
| Natural (wood distillation) | 2,134,000 | 2,158,000 |
| Acetic anhydride | 94,200,281 | 98,307,000 |
| Acetone | 66,145,114 | 63,478,641 |
| Acrylonitrile | 19,436,085 | 21,031,671 |
| 1,3-Butadiene (rubber grade) | 167,746,798 | 173,668,248 |
| Carbon disulfide | 47,273,196 | 44,274,273 |
| Carbon tetrachloride | 32,284,403 | 31,956,640 |
| Ethanolamines (Mono-, di-, and tri) | 8,816,407 | 11,358,774 |
| Ethyl acetate (85 percent) | 7,705,147 | 5,895,001 |
| Ethylene glycol | 100,625,754 | 97,061,605 |
| Formaldehyde (37 percent by weight) | 143,937,706 | 138,955,442 |
| Methanol: | | |
| Synthetic | 143,777,903 | 162,695,773 |
| Natural (wood distillation) | 1,321,360 | 1,321,360 |
| Pentaerythritol | 5,304,381 | 5,132,834 |
| Perchloroethylene | 17,474,142 | 16,826,418 |
| Propylene glycol | 15,116,358 | — |
| Trichloroethylene | 26,786,954 | 29,984,355 |

A dash (—) indicates data not reported.


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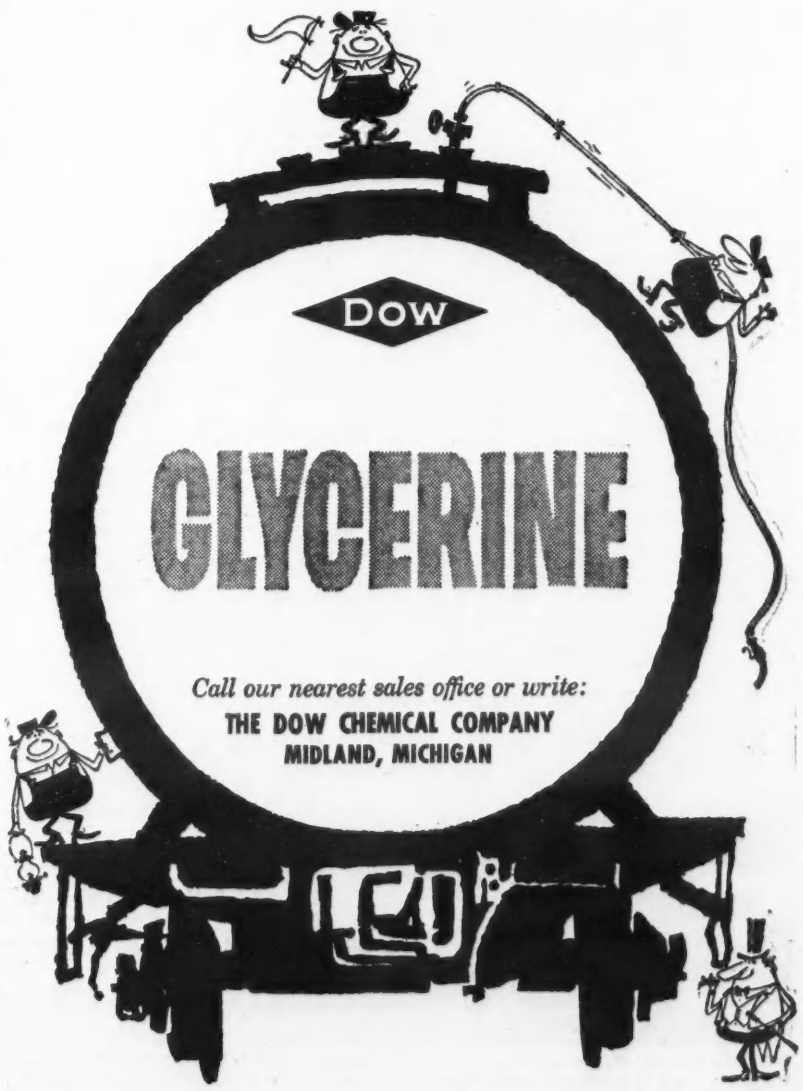

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## Aliphatic Organics

capacity that will be available when nylon-66 no longer figures in the end-use pattern.

Some sources indicate that the furfural route to ADN has been shown to be the most expensive of all. But the chemical is cheaper this month than it was last and maybe this will spur new research. If not, furfural's future is none too bright.

**Molasses**—Markets for feeding cane molasses were mostly steady, but a firm tone developed in a few areas during the week ended August 30. Demand was slightly improved in the South. In other markets, demand was generally slow. Prices at New Orleans edged upwards at mostly 10¼c. to 10½c. a gallon.

Cuban Sugar Stabilization Institute has sold 13.5 million gallons of 1960-crop blackstrap molasses to firms in the US, according to trade sources. Prices paid were 10c. a gallon, basis 52 percent sugar (with a premium for excess sugars) f.o.b. Havana. Shipment of this molasses from Cuba is to be made prior to December 31. This is 2c. a gallon higher than the last sale of Cuban molasses. Reasons for the purchases seem to be based largely on the political situation in Cuba. No attempt to reflect these costs in domestic prices has been indicated.

**Sucrose**—Sugar refiners as well as their customers were left in a quandary last week when Congress, concerned pretty much with politics and campaigns, failed to act on the sugar bill.

Earlier, expectations were that legislation would be passed extending the sugar act for nine more months from March 31, 1961 to December 31, 1961.

It is under the authority of the Sugar Act that the US allots its sugar needs among foreign and domestic suppliers.

**Oxalic Acid**—Less than carload prices for oxalic acid have been advanced from ¾c. to 1¼c. a pound reportedly.

**Vinyl Acetate Monomer**—Three major producers posted lower prices for vinyl acetate monomer last week. Down 1.9 cents a pound across the board, the new schedule lists the tankcar delivered price in zone 1 at 15.6c. a pound, and in zone 2, at 16.6c. a pound.

Not all trade sources agreed as to the reasons behind the significant reduction. For all but the initiator of the change it was, of course, primarily a competitive move. Aside from this, however, the lower prices could reflect excess productive capacity and the challenge from imports. Additionally, it could be interpreted as an attempt to discourage anyone else from getting into the business. A few months back, one will recall, a leading chemical firm announced it was planning to build a vinyl acetate plant in the southwest.

It's also possible that the recent debut of a new producer on the west coast had some connection with the price cut.

Production of vinyl acetate monomer in 1959 was 243,845,000 pounds. Sales totaled 160,123,000 pounds, valued at $25,540,000 with the average price 16c. a pound, the Tariff Commission reports.

Slightly less than one-sixth of domestic output, imports of the monomer in '59 were 39,322,837 pounds, valued at $6,653,924. Most of this material—39,036,190 pounds—came from the Canadian affiliate of a US chemical producer, which used approximately 35 million pounds of the total captively, selling the remainder on the open market. (These figures are trade estimates and thought to be reliable.)

One market observer says that the influence of imports cannot be seen till you get into the market for acetate emulsions. There, he says, you find the real competitive struggle. But there's disagreement on this point, too.


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## OPD Reports From Europe

# *Chemicals Are Sparked Overseas*

*—Continued from page 7*

for production of butadiene, polybutadiene and purification of propylene are expected to be completed.

French companies are reporting increased competition this year, citing American firms particularly, but an increase in some prices of up to 6 percent and boosted output means most are experiencing sales gains of over 15 percent. Pechiney, for instance, reported first half 1960 sales of $94 million, up 20 percent over the first period of 1959.

In Britain, the Esso subsidiary of Standard Oil Company of New Jersey has announced plans to build a 30,000 tons-a-year plant to produce butyl rubber at its Fawley refinery on the south coast of England. Cost of the plant is estimated at about $12 million. The French Esso subsidiary now is operating a 20,000 tons-a-year butyl unit at its Port Jerome refinery near La Havre on the Atlantic Coast.

Dow Chemie, A.G., Swiss subsidiary of Dow Chemical Company, with Staatsmijnen in Limburg will build a phenol plant in Rotterdam, Holland. A sizeable part of the phenol output will be used by Staatsmignen in its production of caprolactam for the manufacture of nylon. Staatsmijnen in its production of caprolactam in 1952, and has increased its production repeatedly. Capitalization of the phenol project is $10.6 million.

The capitalization of German-French joint company Progil-Bayer-Ugine, 50 percent owned by Farbenfabriken Bayer A. G. and the remainder by the two French chemical companies, has been increased to $2.9 million from $510,000. The new funds reportedly will finance a factory at Pont de Claix near Grenoble for the production of plastics to be sold in the French market and the franc zone. Progil-Bayer-Ugine was established to exploit in the French market Bayer's development of polyurethane plastics.

In Germany, Chemische Werke Huls, A.G., reports that it will shortly be producing polypropylene in an existing pilot plant.

**Intensive Work in Olefins**

The company notes it is doing intensive work in the fields of polyolefins and polydiolefins as well as co-polymers of the two groups. Last year, the company put into operation a low-pressure polyethylene plant, a phthalic anhydride unit and an expansion of its styrene facilities.

Chemische Werke Huls notes severe competition in Europe on derivatives of ethylene oxide as a result of many new production facilities coming into operation. Demand for ethylene glycols continues to rise, the company notes.

Some idea of the kind of growth European chemical firms expect can be gotten from the latest plastics forecasts of the German Chemical Industry Federation. The industry group sees German 1960 plastics output hitting 1 million tons, against 795,000 tons in 1959. In the first five months of the year, output of German plastics was up 37 percent and Holland and Britain were the best customers for exports. This, however, was a two-way trade and the trade group notes British plastics exports to Germany are running at a rate nearly three times that in 1959.


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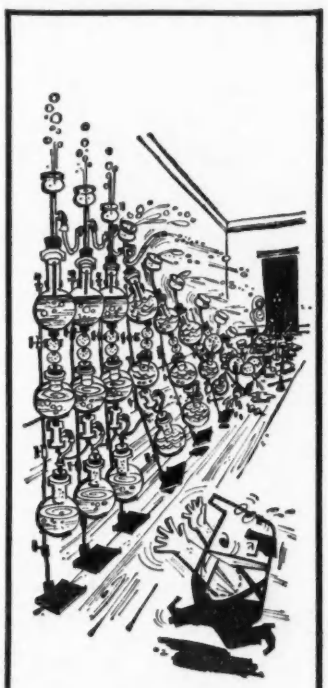

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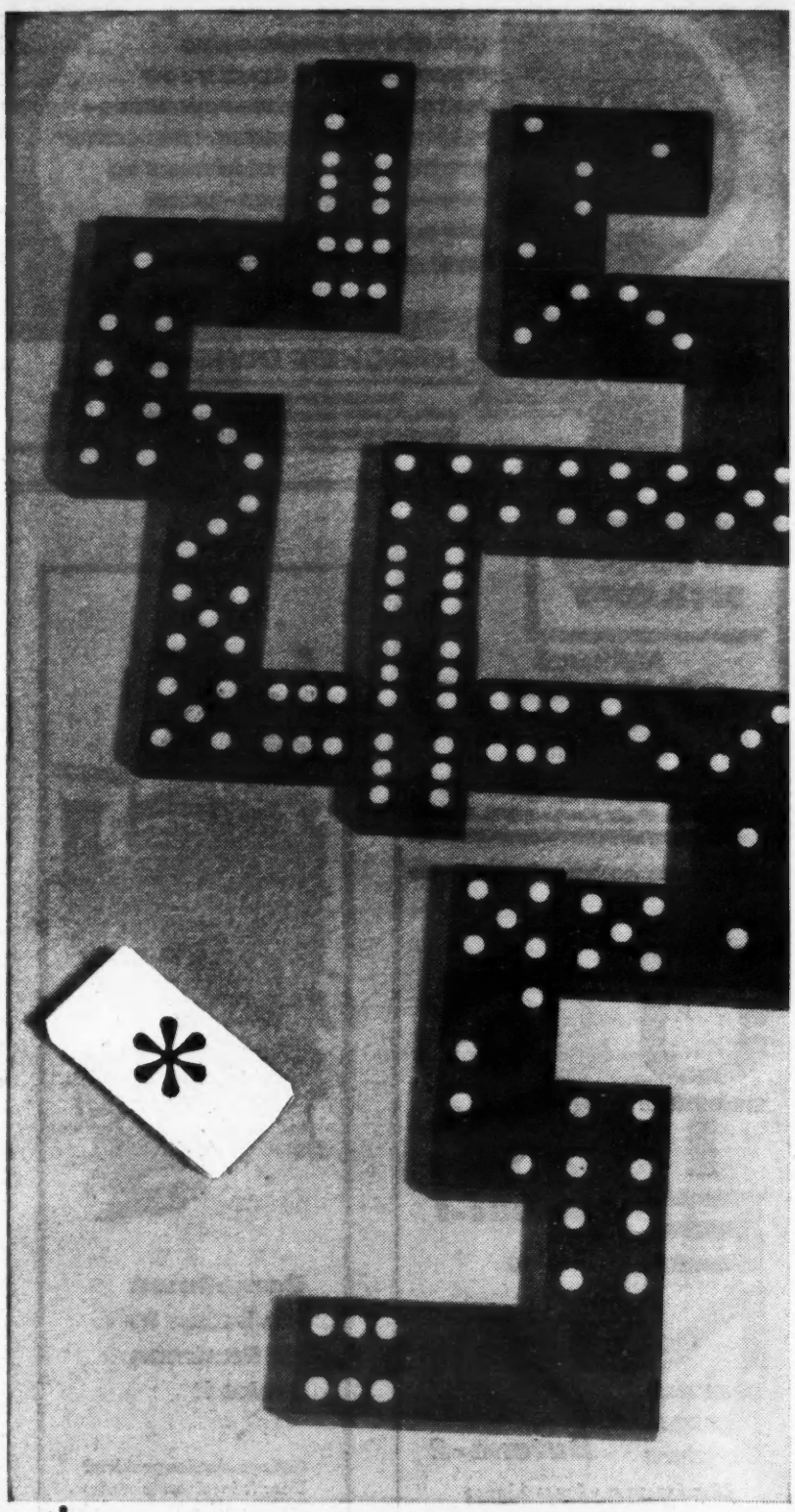

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KOPPERS COAL CHEMICALS


# Coal Chemicals

A major petrochemical producer has slated a ½ cent per pound across the board increase on dodecylbenzene for October 1. The advance brings the tankcar price up to 11½ cents per pound on a freight equalized basis. The company points out that this is the first price increase in dodecylbenzene in over four years despite the fact that production costs have shown a steady rise. No other price changes were noted in coal chemical markets last week. A rumored price increase in store for the benzene market failed to materialize as producers in cokeoven and petroleum industries continued to quote the solvent at 34 cents a gallon at the close of the week.

Although it is too early to say what the effect of the railroad strike will be, one thing appears certain. An extended strike would tie up the vital steel centers at Pittsburgh and possibly in he midwest. This would mean a subsequent tieup in shipments of by-product chemicals from these sources.

Producers report that pressure to supply phthalic anhydride has not been as noticeable in recent weeks as had previously been the case, but it is felt that a normal seasonal pickup after Labor Day, plus a slowing in naphthalene shipments due to an entended rail strike could put the market right back in the hole.

A major chemical producer will build a new plant to produce phthtalic anhydride and phthalate plasticizers. The new unit, to be located in Gloucester county, N. J., will increase the firm's phthalic capacity by 30 percent and will raise phthalate ester capacity by 50 percent.

A one cent per pound across the board advance in the price of diphenylamine effective October 1 on spot and contract has been announced by a major producer.

United States consumption of new rubber amounted to 114,642 long tons in July as against 138,425 tons in the previous month and 141,390 tons in the comparable month last year, according to report of Business and Defense Services Administration.

Production of synthetic rubber amounted to 116,584 long tons in July, while consumption totaled 79,413 tons. Stocks of synthetic rubber on hand at producing plants at the close of July amounted to 235,693 long tons.

The American Iron and Steel Institute estimated that steel production in the week ended September 4 would amount to 53.8 percent of theoretical capacity equivalent to 1,533,000 net tons of steel. Output in the week previous was 1,547,000 tons, 1,537,000 in he comparable week one month ago and 332,000 net tons in the corresponding week one year ago.

### Price Trends

**Advanced**
None

**Reduced**
None

**Comparative Price Indexes**
(100—1949 average)

| Last week | Prev. week | Last month | Sept. 4, 1959 |
|---|---|---|---|
| 118.28 | 118.28 | 118.40 | 118.45 |

*For Current Prices See Page 9*

## Basic Products

**Benzene**—The possibility of a price increase in this market is considerably lessened. Trade sources in petroleum and cokeoven industries late Friday continued to report benzene prices steady at 34c. per gallon, tankcars.

It is pointed out that many companies have thirty day contract clauses and the fact that no advance was announced for September 1 makes it probable that the schedule will remain unchanged through the end of the year.

Although the benzene market is slated to remain tight until after the first of the year, there are some factors reported which would tend to discourage a price rise.

- Veteran observers feel "there are too many potential producers sitting on the sidelines watching the benzene price. An increase might bring them into the market with both feet."
- The bloom has faded somewhat on maleic anhydride demand. The maleic market is snug, but the situation could change rapidly, sources say.
- Styrene monomer consumers, although still slated to increase their requirements in the coming year, will not be buying at the rate they have during the past two years.

While the cokeoven operating rate has moved along at a little better than 50 percent, petroleum processors have been turning out increased amounts of benzene in an effort to close the gap between available supply and demand. However, feedstocks are limited in most cases.

**Naphthalene** — Observers report the supply situation is probably worse this month than last, if that is possible. No import lots of any consequence are available. There was one report of a lot of 5,000 tons offered at 18c. per pound with no takers. A strike on the Pennsylvania railroad could further complicate things for those steel plants serviced by this road. In general, prices quoted on import material, when available, range from 16c. to 19c. per pound. Phthalic anhydride prices are reported to be bringing 22c. to 23c. per pound in Europe with some report of material moving on the continent at 30c.

**Pyridine**—Output of pyridine continues to lag behind demand. Producers have been unable to supply the market for many weeks. Tariff Commission reported production of refined two degree pyridine during the month of June amounted to 273,593 pounds as against 252,721 pounds in the previous month.

## Dyes

The Tariff Commission reported production of Vat green 1 (C. I. 59825) amounted to 200,729 pounds in the month of June as against a total of 95,591 pounds in the previous month.

Output of Direct black 38 (C. I. 30235) was 517,602 pounds, a drop of 14,403 pounds from the 532,005 pounds turned out in May of this year.

Production of phthalocyanine blue, alpha and beta modifications, was estimated at 380,581 pounds as opposed to actual pro-

### Aromatic Chemicals Output: June

Figures for benzene, xylene and toluene include cokeoven operators, tar distillers and petroleum operators. Creosote oil statistics include distillate as such, and creosote content of solution, on 100%-creosote basis.

| | June 1960 | June 1959 | First Six Months 1960 | First Six Months 1959 |
|---|---|---|---|---|
| Aniline ..... lbs. | 10,659,660 | 11,742,956 | 68,370,702 | 67,619,236 |
| Benzene ..... gals. | 37,890,214 | 31,512,411 | 221,693,778 | 181,893,863 |
| Creosote, oil ..... gals. | 7,933,368 | 9,052,185 | 49,095,459 | 50,355,302 |
| Cresols, m-p and o-m-p fractions ..... lbs. | 4,500,507 | 3,790,686 | 23,258,173 | 19,622,518 |
| Cresylic acid, refined all sources ..... lbs. | 5,352,875 | 5,876,841 | 29,133,719 | 30,198,136 |
| Dodecylbenzene ..... lbs. | 48,256,621 | 28,861,701 | 224,387,515 | 257,360,848 |
| Monochlorobenzene ..... lbs. | 47,953,946 | 46,329,383 | 304,823,659 | 265,866,949 |
| Naphthalene crude ..... lbs. | 42,536,362 | 50,714,282 | 288,530,205 | 239,592,942 |
| Phenol, tech. and USP ..... lbs. | *68,326,650 | †60,046,574 | *389,560,535 | 328,121,391 |
| Phthalic anhydride ..... lbs. | 31,988,901 | 31,850,121 | 194,875,736 | 187,464,561 |
| Styrene monomer ..... lbs. | 150,384,528 | 133,199,624 | 868,402,790 | 753,032,188 |
| Toluene ..... gals. | 21,241,014 | 21,647,443 | 126,010,675 | 125,084,303 |
| Xylene ..... gals. | 26,202,677 | 19,730,510 | 143,357,521 | 108,279,902 |

Source: Tariff Commission.
* Partly estimated.
† Revised.

# Coal Chemicals

duction in the previous month of 309,951 pounds.

## Intermediates

**Cyclohexane** — A petrochemical producer came on stream this year with a plant at Port Arthur, Tex., which boasts the only commercial production of cyclohexane from benzene. However, another unit of 20 million gallons capacity is slated to come in this month at Ponca City, Okla., and this producer will also hydrogenate benzene to cyclohexane.

Some sources feel that extensive marketing of cyclohexane from benzene must await a looser benzene market, since producers will move all the benzene they can make into the domestic market at 34c. per gallon rather than hydrogenate it to 36c. cyclohexane. In addition, reports continue to indicate that benzene is bringing premiums in the export market. The largest producer in the cyclohexane field, with plants at Borger and Sweeny, Tex., uses natural gas liquids as raw materials. Major end-use for the material is in the production of nylon 66. Additional outlets are as an intermediate in the production of plasticizers, for laboratory extraction procedures, as a paint and varnish remover and as a solvent in the production of linear polyethylene. The latter could form a big volume outlet in the coming years, sources indicate.

**Diphenylamine**—A major producer reported a one cent per pound across the board advance effective October 1 on spot and contract.

Under new schedules, flake material, bags, car loads, freight equalized, will be 32c. a pound; less car loads, same packing, 34c. Refined, fused diphenylamine in tankars will be 29c. per pound. Price on refined diphenylamine in drums is half a

**Dodecylbenzene**—A major producer reported a ½c. per pound price increase on the company's dodecylbenzene detergent alkylate. New price of the material in tankcar quantity is 11½c. per pound, f.o.b., Richmond, Calif. This is the first increase in four years, the company points out, while cost factors have continued a steady advance.

**Maleic Anhydride** — Sources indicate that the bloom may be off the rose as far as demand from the polyester outlet is concerned. Expansion in this direction is still expected but not at the bustling pace characteristic of the market for the past two years. A major producer recently announced completion of a 20 million pound expansion in the company's maleic production capacity. The boost brought the firm's potential up to an estimated 60 million pounds per year.

### Coal Chemicals

Estimated output of coal chemicals recovered from cokeoven operations during the week ended September 4, were as follows:

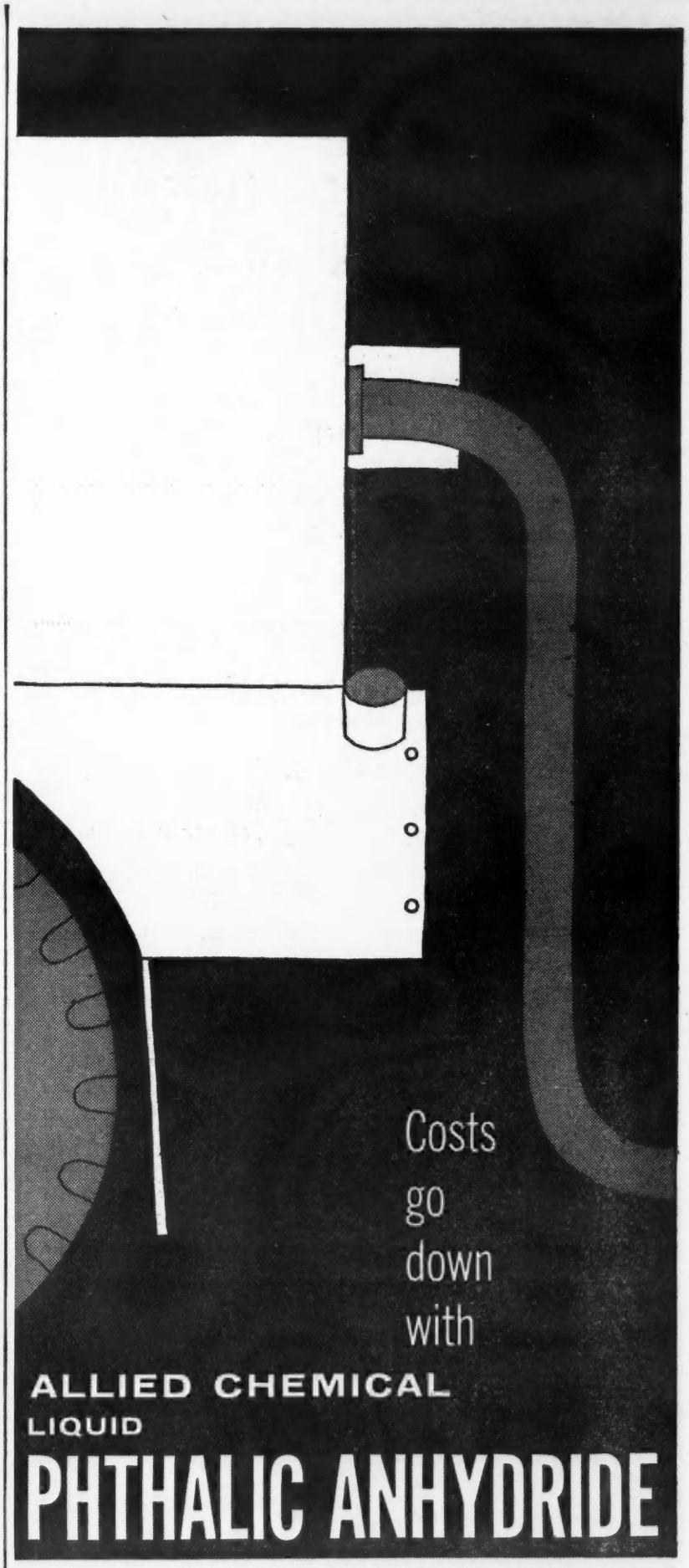
| | | |
|---|---|---|
| Ammonia liquor | lbs. | 485,110 |
| Ammonium sulfate | lbs. | 20,401,596 |
| Benzene | gals. | 1,967,393 |
| Coaltar | gals. | 10,753,285 |
| Crude chemical oil | gals. | 314,423 |
| Solvent naphtha | gals. | 62,884 |
| Toluene | gals. | 440,192 |
| Xylene | gals. | 125,769 |

**Phthalic Anhydride**—The critical supply position on naphthalene continues to be a cause for concern to most sources. Although demands for PA have not been as pressing in recent weeks, the market is still undersupplied and a normal seasonal pickup in demand this fall coupled with any slowdown in naphthalene shipments due to an extended railroad strike could put chemical producers right back in the hole. The export market is strong. Sources indicate that phthalic anhydride in Europe is bringing 22c. to 23c. per pound with some report of material moving at 30c. Domestic schedules are unchanged. PA is quoted at 19c. a pound for flake material in tankcars, freight equalized.

Production of phthalic anhydride in the first half of the year amounted to 194.8 million pounds, a 7.4 million pound increase over the comparable period of last year.

Exports of phthalic during the six month period were 9.9 million pounds as against 3.7 million pounds in the first six months of 1959.

Tariff Commission reported output of dibutyl phthalate in June totaled 1,177,400 pounds as against 2,030,951 pounds in the previous month. Dioctyl phthalate production during the month ran to 14,897,848 pounds as against 12,607,467 pounds in May.

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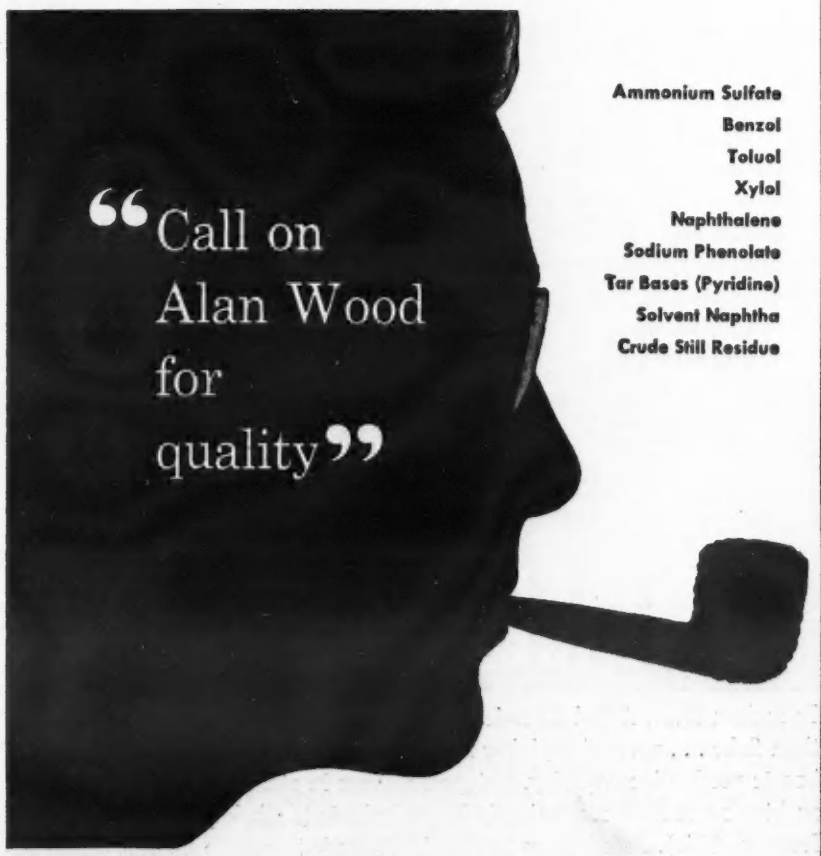


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# *Food Additives Bill Looks Good to Industry*

*—Continued from page 1*

consideration at all from the standpoint of extensions.

"I do, however, believe that there may be a sound basis for legislation authorizing further extensions where long-term pharmacological studies are under way and obviously cannot be completed before next March 6.

"In such cases, I would think that the possibility of further extensions, where it can be demonstrated that no undue hazard to the public health would result, may well be justified."

In pressing for the extension legislation, Mr. Mulford—who is assistant to the executive vice-president of Atlas Powder Company, Wilmington, Del.—said the change "would entail no compromise with the principle of public safety," but would "go a long way toward facing the facts of life in scientific research."

Mr. Mulford pointed out that the procedures of the 1958 act and the FDA regulations call for time-consuming research.

**Other Difficulties**

He emphasized the difficulty in developing practicable, quantitive methods of analysis for some ingredients, and also noted that "there are only so many research workers and facilities available" for gathering their required information.

In this connection, the MCA spokesman said he recently calculated the time involved in processing petitions on to related products on which a food additives regulation was issued not long ago.

"It took over 500 days from the time of filing until the issuance of the regulation: The time during which the petitioned awaited action by FDA was 372 days, while the time during which FDA had to await action by the petitioner on requests for further data was 137 days.

"The petitions, incidentally, involved products on which FDA had been given extensive data on composition and safety testing before passage of the 1958 act."

FDA procedures for listing substances "generally recognized as safe" (GRAS) also came in for criticism from the Atlas executive.

Mr. Mulford said he is certain most food, drug and cosmetic lawyers "do not share the view that GRAS listing by FDA should expose the ingredient to the casual and apparently confidential opinions of scientists who have had no particular experience with or knowledge of the product.

**Who's Qualified to Determine Safety?**

He contended that "the scientists qualified to evaluate the safety of a particular ingredient are the ones who have made a thorough study of its uses and physiological properties and not a large group of what might be called 'outer space' scientists with no particular knowledge of the ingredient."

William W. Goodrich, general counsel of FDA, speaking before the same ABA session, defended the agency's panel of 800 scientists.

"While we can readily agree that all the 800 were not qualified to evaluate the safety of each of the substances on the initial [GRAS] list, they did represent a good cross-section of the scientific community."

What's more, he went on, FDA "thoughtfully weighed" all opinions before reaching a decision and threw out "mistaken or ill-advised" views.

The nub of the FDA-industry disagreement on GRAS listing, Mr. Goodrich pointed out, is that "there is a difference between a product generally recognized as safe and one which can be proved safe by assembling all the scientific data about it. The first is exempt. The latter is not."

**Getting Tired of Controversy**

The FDA counsel made it emphatically clear that the agency which in his opinion has the legal backing to determine that a "substance is not one that is generally recognized as safe," is getting a little tired of the GRAS controversy.

"It seems clear," he said, "that persons convinced that their products are generally recognized as safe, but who have not been able to convince us, would be well advised to start work on food additives petitions.

"If the substances are as safe as the petitioners think they are, there should be little trouble preparing convincing petitions. And we can anticipate early issuance of the needed regulations.

"But extending the argument over the GRAS list is not likely to be profitable."

Meanwhile, FDA continues to plow its way through its massive food additives processing job, last week issuing time extensions to some 200 substances migrating from rubber and rubber products used in food handling, and to four direct and eleven indirect food additives.

The rubber product extensions include elastomers, vulcanizing materials (vulcanizing agents, accelerators, retarders and activators), protective agents (antioxidants and antiozomants), plasticizers, fillers (channel-processed carbon black and light-colored fillers), colors, lubricants and some miscellaneous materials.

The complete list of new time extensions will appear in next week's OPD.

## Chemists' Club Offering Process Economics Course

The Chemists' Club, New York, is now offering a seminar series on "Chemical Process Economics," consisting of five lectures which will get underway Wednesday, September 21 and continue on alternate Wednesdays.

Lectures will be conducted by Dr. John Happel and Dr. William H. Kapfer, both of New York University. Dr. Happel is author of the text "Chemical Process Economics."

Tuition for the series is $60, including dinner before each session. Meetings will convene at 5:15 in the Bogert Room of the Chemists' Club. Applications should be sent with check to the club's secretary at 52 East 41st Street, New York, 17.

## RSA's Hdq.: Ardsley, N. Y.

Due to a printing error, the directory of addresses in OIL, PAINT & DRUG REPORTER's 1960 Buyers Directory failed to list the city in which R. S. A. Corporation is located. The company's full address is 690 Saw Mill River road, Ardsley, N. Y. This address is given fully and correctly on the company's advertisement on page 1027 of the directory.

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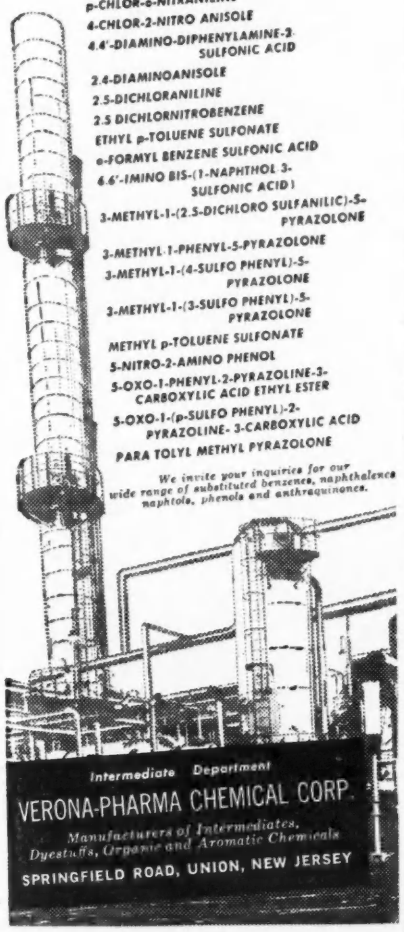

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## FTC Sets Trade Rules For Fluorocarbon Market

Answering an industry request, Federal Trade Commission has come up with a set of trade practice rules for the fluorocarbons market.

Producers and sellers of fluorocarbon products will have a chance to present their views on or objections to the FTC's proposed rules at a hearing to be held September 15 at the Biltmore hotel, New York.

The suggested regulations are aimed at maintaining fair competitive conditions among firms engaged in the manufacture, fabrication, processing, sale and distribution of finished or semi-finished products which are composed in whole or substantial part of fluorocarbon resin.

These products include, but are not limited to, wire and cable designed for transmission of electricity which use fluorocarbon resins for insulation, gaskets, bearings, rod, tubes, hose, sheets and machinery parts made of or coated with fluorocarbon resins.

The rules cover such touchy trade subjects as misrepresentation of standards, substitution, deceptive use of trade or corporate names, false invoicing, fictitious prices, guarantees and warranties, price fixing, below-cost sales, lifting of stocks, consignment distribution, defamation of competitive products, exclusive deals and commercial bribery.

## PMA Files With FDA For Coaltar Color Okay

In a move designed to get the machinery rolling under the newly-passed color additives law, Pharmaceutical Manufacturers Association has filed a statement with Food & Drug Administration asking that certified coaltar colors be approved for use in drugs.

The material, in tabular form, is based on a survey conducted by PMA's Pharmaceutical Contact Section about a year ago. It tells what quantities of colors are used by PMA members, whether the drugs are in tablet, liquid or capsule form and the maximum amounts needed.

The PMA memorandum seeks temporary listing of the necessary colors pending the establishment of tolerances by FDA.

## *Explosives Transportation*

*—Continued from page 5*

plosive shipments given to interstate carriers, whether or not their destination is in another state.

It also officially extends the regulations now covering the shipment of poisons to etiologic agents and radioactive materials —all of which materials have heretofore been arbitrarily classified as poisons by ICC.

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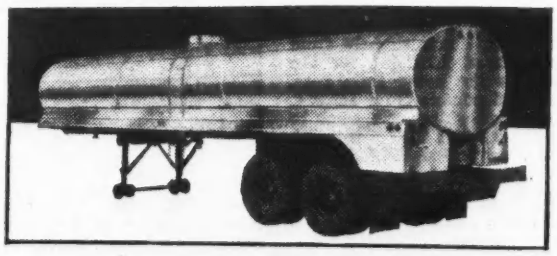

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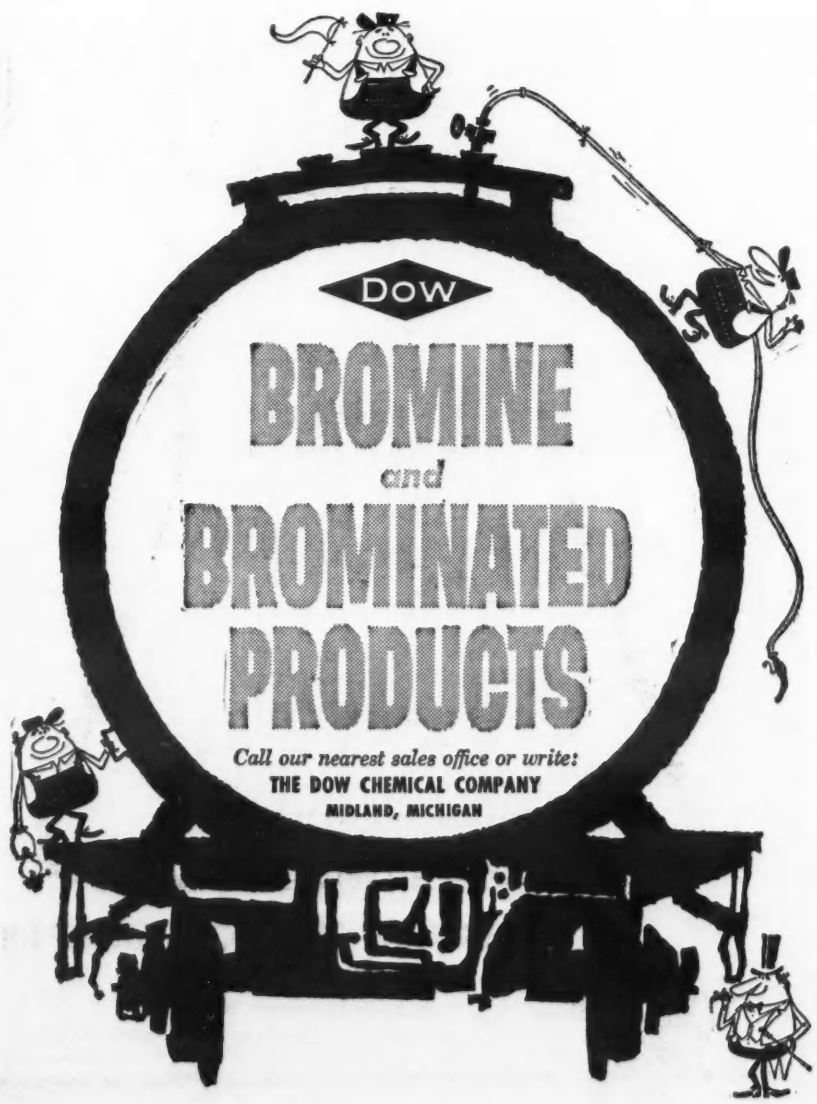



# Drugs, Fine Chemicals

**Consumers are paying appreciably more these days for Brazilian menthol. A conservative estimate is $8.75 to $9 a pound—the large crystals commanding the premium—but prices of up to $9.10 a pound have been reported. Behind this latest show of market strength, trade sources say, are the usual factors: small stocks on spot and the lack of replacements and firm offerings. Also noted is that Japan has little menthol to offer and, in fact, will likely turn net importer this year; and that markets in Europe, notably England, are very firm because requisite supplies are not available from a customary source, the Red Chinese.**

Much of the acreage previously planted to peppermint in Japan has been turned over to food crops reportedly; thus imports will be needed to fill the gap, putting further pressure on Brazilian stocks and prices. At the same time, menthol demands are increasing in Japan due to the popularity of mentholated cigarettes. The same is true in South America and in Europe where US as well as local brands are now being marketed.

Food & Drug Administration made it official last week: Vitamin preparations containing more than 0.4 milligrams per daily dose must be relabeled for sale only on prescription. Existing stocks, the agency said, must be relabeled promptly even though a reasonable amount of time would be allowed before taking court action to enforce the ruling.

Since FDA made its original recommendation in July, there has been understandable concern over the fate of folic acid. Last week, as the smoke cleared, indications were that the ruling will effect bulk sales. It is easy to see why. Tableters, accustomed to putting more folic than today's legal limit into a formulation, are automatically left with outsize stocks. What had been for these people a two month inventory, perhaps, may now be enough to carry them for a whole year.

How the folic ruling will affect Japanese imports is not yet clear. Of course, if it causes the Japs a loss of markets, they may put the squeeze on domestic manufacturers, who are hard-pressed as it is.

A US supplier has boosted the price of crude iodine to $1.10 a pound. That the higher quote will stick is somewhat questionable. Chilean iodine is priced lower at 95 cents a pound and there is no indication that a change is in the works. And not to be underestimated, of course, are Japanese exporters of iodine. With the lower price on the domestic material, they may be inclined to increase shipments to this market.

**Ascorbic Acid**—Output of ascorbic acid totaled 1,174,766 pounds during the first quarter of the year, down slightly from 1959's alltime high of 1,192,484 for the period. Exports at the same time rose, however, to 183,438 pounds from 113,334. Of these, the largest shipments went to Belgium-Luxembourg (32,033 pounds), Canada (29,105), Argentina (26,613), and Mexico (17,642).

**Aspirin**—The same situation holds true this year as did last. Aspirin tableters are taking good quantities of bulk material, in advance of the big Fall sales rush.

Since late July, a spokesman for a bulk producer reports, shipments of aspirin have been steady.

Orders are now coming in for delivery later this month and all indications point to another record year of aspirin consumption.

## Price Trends

**Advanced**
None

**Reduced**
None

**Comparative Price Indexes**
(100=1949 average)

| Last week | Prev. week | Last month | Sept. 4, 1959 |
|---|---|---|---|
| 59.93 | 59.93 | 59.93 | 60.49 |

*For Current Prices see page* **9**

Business & Defense Services Administration, one of the many arms of the Department of Commerce, notes that production of aspirin in the first quarter of 1960 totaled 6,089,995 pounds, considerably higher than the 4,789,706 pounds turned out during the comparable period in '59.

The first quarter of this year also saw a rise in exports—to 251,327 pounds from 193,938—with major shipments going to the Philippines (50,700 pounds); Colombia (41,500); Canada (38,000), and Chile (35,104).

**Folic Acid** — It's official. Vitamin preparations containing more than 0.4 milligrams of folic acid per daily dose must be labeled for sale only on prescription.

In finalizing what had been a proposal a month ago, FDA said that existing stocks must be relabeled promptly, but that a reasonable time will be allowed before taking court action to enforce the ruling.

Preparations furnishing less than 0.4 milligrams or less of folic acid daily will be permitted to be sold over the counter until March 6, 1961. After that date, they may continue to be sold in this manner provided satisfactory proof of safety for the intended use is submitted in a petition as required under the food additives law.

The controversy over folic acid began in June, when Dr. Barbara Moore testified before the headline-seeking senate antitrust and monopoly subcommittee, chaired by Sen. Estes Kefauver.

The zealous Dr. Moore said that she had compiled evidence showing that folic acid could mask the symptoms of pernicious anemia. FDA investigated her charge and followed up with a proposal to limit vitamin preparations containing more than 0.4 milligrams of folic acid to the daily dose to prescription sale only. Last week, the recommendation became a ruling.

In the interim between recommendation and ruling, the trade was justifiably concerned over the fate of folic acid. But as July and early August are normally poor anyway, they couldn't tell what effect FDA's action would have on sales. Recently, however, the situation has become somewhat clearer and indications are that it's going to cause a drop-off in business.

It is immediately apparent, of course, that tableters who have traditionally incorporated more folic acid than is allowed today in multi-vitamin preparations, are stuck with big inventories. What was a normal 60-day requirement, perhaps, may now be equivalent to a year's supply. Then again, it's not unlikely that folic will be left out of some new formulations.

On top of this, the domestic trade is faced with imports from Japan. These, as one might suspect, are selling at less than

## Drugs and Fine Chemicals Output: June

Following statistics for selected fine chemicals and drugs were compiled by the Tariff Commission. Figures relate to the production of bulk material only.

| | | *June* | *May* |
|---|---|---|---|
| Acetylsalicylic acid | lbs. | 1,906,188 | 1,991,827 |
| Ascorbic acid and salts | lbs. | 434,668 | 483,214 |
| Dihydrostreptomycin | gms. | 17,077,300 | 14,212,843 |
| Niacin and amide | lbs. | 223,777 | 296,938 |
| Penicillin salts | million-units | 37,884,440 | 44,559,986 |
| Phenobarbital | lbs. | — | — |
| Pyridoxine | lbs. | 6,936 | 7,224 |
| Streptomycin | gms. | 21,343,914 | 30,627,671 |
| Sulfa drugs | lbs. | 416,689 | 470,765 |
| Tetracycline | gms. | — | — |
| Thiamin derivatives | lbs. | 28,712 | 25,672 |

* Revised.
A dash (—) indicates data not reported.

30c. a gram, the listing carried by a big US maker.

With the loss of some markets likely, the Japanese could attempt to move into areas now the domain of domestic manufacturers.

A gloomy picture, what?

**Iodine**—A domestic supplier has boosted the price of crude iodine to $1.10 a pound. In announcing its move, the firm said that the increase was dictated by cost considerations.

How this price change will affect the overall market is not yet clear. Although the US firm has said, reportedly, that it could take care of domestic demand to a large extent if called upon to do so, much of the US requirement for iodine is today supplied by Chile. And Chilean material is priced, unchanged, at 95c. a pound. Furthermore, there is no indication that the quote will be advanced.

Another factor in the US market, as yet not broadly significant, is the material that has been coming in from Japan. This stuff is priced lower than the Chilean iodine and in some locales on the west coast amounts to a real competitive factor. Knowing the aggressiveness of Japanese traders, it is thus somewhat unusual for a US supplier to advance prices. In most markets, it's the other way around. Domestic sources drop prices in face of the Japanese competition.

**Menthol**—Prices for Brazilian menthol have strengthened appreciably. Last week consumers were paying about $8.75 to $9 a pound with the large crystals commanding the premium.

Trade sources anticipate a still firmer market. They note that spot stocks are getting progressively smaller and, due to a lack of offerings, are not being replaced. In fact, they add, coupled with the delay in shipments, this situation could easily develop into a supply shortage in coming months.

The new crop from Brazil, which won't be ready for shipment until January or February, is likely to be no higher than last year's. This is because the Brazilians are limited in the amount of land they can plant to peppermint. This is also true of Japan where much of the land previously used to grow peppermint has been turned over to the cultivation of food crops. For this reason primarily, Japan is expected to be a net imported of menthol this year. At the present time, the Japanese are offering little or no material for export.

Some material is available from Formosa at about $8 a pound, also higher than previously, but as this material varies in quality from lot to lot, buyers are often reluctant to purchase it.

Markets for menthol are particularly firm in Europe, notably England. Unable to fill requirements from their normal suppliers in China, buyers there have turned to Brazil. This, of course, has increased the pressure on prices worldwide.

One of the factors that boomed demand for menthol in the US is swiftly becoming a factor in Japan and South America, as well as in Europe: mentholated cigarettes.


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## Drugs, Fine Chemicals

According to trade reports, US as well as local brands are being introduced all over the world.

## Botanicals

Although demand for botanicals that get into pharmaceutical preparations—cough syrups and the like—has picked up, demand overall is still rather slow. This, of course, has curtailed price activity. A resumption of buying, expected shortly, will probably see some price fluctuation, however.

**Locust Bean Gum**—According to a recent report from a trade source close to this market, locust bean gum is firm now with further strengthening very likely. Shipping prices, he says, were up 18 percent in January and then an additional 10 percent in June.

Indicating that still higher prices can be expected are these factors: the big demand in Europe where markets for the gum are fast developing, and the loss of thousands of tons of the gum due to an earthquake in Morocco, a prime supplier.

Foreign suppliers reportedly are refusing to extend shipment beyond December.

### *CBR Warfare's Possibilities*

*—Continued from page 3*

CBR weapons orientation courses at Dugway said: "I'm an enthusiast over biological and chemical warfare. I think it's great stuff. It's more humane than anything else we've got."

Reports in the daily press did not reveal to what extent Col. Prentice's enthusiasm caught on among the spectators.

The disarmament subcommittee's report discusses the relevant factors to be considered in determining the extent to which the control and reduction of CBR weapons should be part of any arms control program.

Of particular importance is the conclusion drawn in this study that presently known inspection measures for verifying any limitation on the production or development of chemical and biological weapons have a low degree of reliability.

"If these weapons are to be included in future disarmament agreements much more must be known about control features," it is stated in the report.

Apparently neither the executive branch of the government nor private research institutions have instituted studies of ways in which these weapons might be controlled in a disarmament agreement.

"Such studies," the committee feels, "need to be undertaken so that if chemical and biological weapons were to be incorporated as a part of an arms control agreement, effective inspection measures would be known and could be applied.

"This is an area in which an international conference of experts might be called profitably to consider the problems and possibilities of control."

### *Polyethylene Fires*

*—Continued from page 3*

reported first by the Minnesota hospital and confirmed in tests by the Minneapolis fire department.

Society of the Plastics Industry, acting as official spokesman for plastics producers in this matter, reports that work is being pressed to develop a moldable fire-retardant polyethylene.

National Board of Fire Underwriters reported last week that it has moved into the picture and wants to know what is being done by the industry to prevent such flash fires. National Safety Council also continues to sift particulars.

A spokesman for NBFU pointed out that the plastics industry has faced any number of problems for many years regarding fire hazards—particularly when a plastic is put into a new application.

The industry has always come through with remedies for its difficulties with flying colors, through alteration of compounds or uses, or through education, he said.

Thinking in fire prevention circles is that the topic will undoubtedly come up for discussion before the International Association of Fire Chiefs, which meets this week in Rochester, N.Y.

The Fire Prevention Bureau of the New York City Fire Department told OPD last week that polyethylene acts similarly, when it burns, to a number of other materials commonly found in home and industry.

A spokesman for the bureau cited wax, tar or oil fires as examples. "If you slop a little water on a fire like that, the burning material is bound to spatter," he pointed out.

The bureau and other agencies recommend smothering, spraying with a fine mist (fog nozzle) or liberal application of water in the case of a smoldering, molten hydrocarbon fire.

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## Old-Age Care Bill Action A Victory for Medical Men

In what is generally considered as a stunning victory for the American Medical Association, the senate last week cleared for the President a moderate old-age medical care bill.

The measure, which provides for a voluntary type of medical care for the aged to be inaugurated by the states with federal matching funds, was approved by the senate 74 to 11. Mr. Eisenhower is virtually certain to sign the bill.

The final vote came after the senate trampled on the Social Security approach to medical care. The action was a bitter defeat for Democratic Presidential nominee John F. Kennedy, who declared that he will "take the matter to the people" and let them decide in November what road they want congress to take next January.

The senate also rejected a contributory insurance plan offered by Sen. Jacob K. Javits of New York.

Total cost of the approved medical care bill is figured at around $263 million the first year and $530 million later on. The federal government's share will come to $200 million the first year and $340 million in later years as the program becomes fully effective.

The states will decide what payments are to be made to the medically needy and what eligibility standards must be met. A state has the right to refuse to participate in the program.

## CIPC Gets USDA Nod; It Keeps the Sprouts Down

Potatoes can be stored at 55 degrees Fahrenheit for as much as a year without sprouting when treated with an 0.25 to 0.5 percent solution of CIPC (isopropyl N (3-chlorophenyl) carbamate).

So reports the Department of Agriculture, which has accepted the chemical for registration. A tolerance for CIPC to cover residues left by its commercial use was established recently by Food & Drug Administration.

Sprouting lowers potato quality, shortens storage life and causes shriveling because moisture is lost through sprouts.

When properly used, CIPC prevents deterioration of potato appearance and does not affect the taste, USDA researchers found. Potatoes do not make good chips if they are stored at temperatures below 50 degrees Fahrenheit.

Such temperatures are maintained in potato warehouses to check sprouting of untreated potatoes, but these temperatures are not effective after potatoes have been stored three to four months.

CIPC is also used as a herbicide to control annual grasses in cropland.

Big producer of the chemical in this country is Columbia-Southern Chemical Corporation, Pittsburgh, Pa., a subsidiary of Pittsburgh Plate Glass Company.

## *Abbott Ready to Give*

*—Continued from page 3*

company to attempt large-scale sale of radioactive material produced in a privately-owned reactor.

Machine-produced isotopes—that is isotopes made in accelerators—have been available for some time from Nuclear Science & Engineering Corporation, Pittsburgh, Pa.

Nuclear Science offers aluminum 26, sodium 22, vanadium 48, copper 67, lead 103 and a host of other isotopes.

Abbott's radioactive iodine will be produced by Westinghouse Electric Corporation's test reactor at Waltzmill, Pa.

The firm is also negotiating with General Electric Company, for production at GE's Pallecito, Cal., reactor. These are the only privately-owned test reactors in this country.

Abbott's base price will be $55 for one-tenth of a curie. A curie is that amount of any radioactive material which emits an amount of radiation equal to that emitted by a gram of radium.

AEC's price for one-tenth of a curie of radioactive iodine 131 is $60, which includes a $20 charge for handling.

Though Abbott's price is less than 10 percent of that of AEC's. Abbott says that it will in effect be able to offer another 10 percent reduction by discounting in advance of shipment twenty-eight hours of radioactive decay, thus giving the customer more isotope for his money.

Radioactive iodine loses half of its radioactivity every eight days and, Abbott says, AEC does its radioactivity measurements as of the morning of shipment.

Abbott will offer delivery in three days or less. AEC, which makes shipments twice a week by rail or air, makes deliveries five days after receipt of the purchase order.


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## Resisto and Bzura File For Stock Registrations

Resisto Chemical, Inc., New Castle County Air Base, New Castle Hundred, New Castle County, Del., has filed a statement with the Securities & Exchange Commission seeking registration of 200,000 shares of common stock to be offered for public sale at $2.50.

Organized in 1958, Resisto produces protective coatings for packaging and fabrics and insulation products. Net proceeds of the proposed stock sale will be used largely for working capital to buy raw materials, pay operating expenses and for general corporate purposes.

Bzura Chemical Company, Keyport, N.J., hasfiled a statement with SEC seeking registration of 450,000 shares of common stock.

The number of shares to be offered for public sale and the price will be furnished SEC later by the company.

## *Sea Water*

*—Continued from page 7*

that Interior will "soon be close" to the 50-cent price.

Just how important is cheap water? To the chemical industry, for instance, it is a key operational factor.

Item: It takes 240,000 gallons of water to produce one ton of acetate.

Item: For one ton of synthetic rubber, more than 500,000 gallons of water are needed.

The Freeport plant is one of five authorized by a saline water conversion law enacted in 1958. The other demonstration units:

- A facility to be located in San Diego, Calif., is expected to be in operation within a year. It will produce potable water by a flash distillation process.
- A third plant at Webster, S. D., will in Roswell, N. M.—will employ a forced use the electrodialysis process and should be running by the fall of '61.
- A fourth installation—to be erected vapor compression process.
- The fifth plant, at an East Coast site not yet announced, will take salt water out of the Atlantic Ocean, freeze it and turn it out fresh.

Ahead, Mr. Seaton reveals, are these new methods of converting sea water: by shooting gas through it and causing it to freeze; by boiling it with radioisotopes.

The Interior Secretary envisions great things in the future in this field. Here is how he put it last week:

"We can foresee giant plants twenty, thirty or even a hundred times the size of this one [the Freeport installation] for the large cities located along our seacoasts.

"We can foresee individual home units, costing $300 or less, turning brackish water out of the ground into fresh water which people and cattle can and will drink.

"We can foresee mobile saline water conversion units speeding to areas in which waters have been contaminated by floods and mobile Civil Defense units standing ready to purify water contaminated by radioactivity."

## *Furfural Situation*

*—Continued from page 3*

butadiene-adiponitrile route to nylon, which is reported to be more economical than the furfural—ADN process.

With three plants and an estimated capacity of 100 million pounds of furfural a year, Quaker Oats is undoubtedly hard-pressed to develop new end-uses quickly —the obvious intent of the price reduction. To cover its expected losses, however, will be extremely difficult, the experts are predicting.

Use as a chemical intermediate, principally in nylon, accounts for as much as 60 percent of total furfural consumption. In addition, there are four other uses which take more than a million pounds a year: as a selective solvent in the refining of lubricating oil; the extractive distillation of butadiene; the manufacture of phenolic resins, and the decolorizing of wood rosin. All of these, however, are small in comparison with nylon.

Prior to duPon't announcement, which appeared only in Buffalo and Niagara Falls newspapers, and the furfural price reduction which followed, trade people had a clue that duPont was contemplating a complete change-over to the butadiene route to nylon. This was the 30 percent drop in imports of furfural from the Dominican Republic during the first half of 1960 from the camparable period in 1959.

The only country to export furfural to the US, the Dominican Republic reportedly has an exclusive contract with duPont.

Now, with economic sanctions against Trujillo's island pending, Quaker Oats may be in line for a little extra business—if only temporarily. In the long run, however, its lower prices will have to discourage imports and open up new markets.

## FDA Sets Tolerances For Hercules Product

Food & Drug Administration has established tolerances for residues of 2,3-p-dioxanedithiol-S, S-bis (O, O-diethylphosphorodithioate) containing approximately 70 percent cis and trans isomers and approximately 30 percent related compounds. The tolerances are as follows:

2.8 parts per million in or on grapefruit, lemons, limes, oranges, tangelos and tangerines.

2.1 parts per million in or on grapes.

1 part per million in or on fat of meat from cattle, goats, hogs and sheep.

The FDA action is in answer to a petition by Hercules Powder Company, Wilmington, Del.

Acting on a petition by Niagara Chemical Division, Food Machinery & Chemical Corporation, Middleport, N.Y., the agency has also set tolerances for residues of ethion (O,O,O', O'tetraethyl S,S',-methylene bisphosphorodithioate) of 1 part per million in or on apples, grapes, mellons, peaches, pears, plums and prunes.

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**Succinylcholine Chloride,** USP, 1 gm. 10,368 pkg. Bid IFP 7741Q, Sept. 6. Military Medical Supply Agency, 29th and 3rd Ave., Brooklyn 32, N. Y.

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# Coatings Materials

Against essentially routine market conditions, some price changes are reported for the week. New price schedules, effective September 1, calling for a ¾ cent per pound increase on modified phenolics, maleic resins, and ester gums, were released by one leading producer. In all, about 23 grades within the three listings are affected. No price changes are scheduled for the producers trade name modified alkyds, urea coating resins, melamines, pure phenolics or alkyd copolymers. For the producers' modified phenolics the price range on c/l shipments (drums) is 25 cents to 26¾ cents per pound. The new range for the maleic resins, same basis, is 25 cents to to 36¾ cents per pound. The new price for the ester gums is 21 cents per pound.

Also on the September 1 list of price changes are the earth colors. Several of the earth colors are reported to have been raised an average of ¼ cent to 1 cent per pound. The producer reports that a new price schedule will be available shortly. Slated for changes are the metallic browns, burnt siennas, raw umbers and raw siennas. Excluded from the price advance are the pure iron oxides of black, yellow and red, as well as the synthetic iron oxides. Other producers contacted by OPD stated that they have not determined what action they will take, preferring to follow market developments.

Other areas of the coatings market reported generally quiet conditions. Pigment demand was about normal for the week, with no price changes reported.

The market for Argentine casein continued to be very quiet this week. Reduced buying interest narrowed the range of Argentine casein to a ¼ cent per pound spread. Latest quotation Friday was 20 cents to 20¼ cents per pound, off about ¼ cent on the upper side of the range from two weeks ago.

Stocks of casein in the Argentine are reported to be somewhat improved. The new producing season in the Argentine is getting underway, and this combined with the lessened demand is reported to have brought stocks into a better balance. The outlook for the new season, according to one source, indicates a good year for production, but the overall market picture is still very much undecided.

## Price Trends

**Advanced**

Earth colors, ¼c. to 1c. per lb.

**Reduced**

Casein, Argentine, ¼c. per lb.

**Comparative Price Indexes**

(100—1949 average)

| Last week | Prev. week | Last month | Sept. 4, 1959 |
|---|---|---|---|
| 103.13 | 103.16 | 103.16 | 103.03 |

*For Current Prices see page 9*

## Prime Pigments

**Aluminum Paste and Powder**—Except for a short period earlier in the year, market conditions for aluminum paste and powder, particularly for use in exterior paint formulations, has been only slightly better than routine. Supplies are quite ample. Prices are unchanged from their longstanding listings.

**Carbon Blacks**—Demand for the carbon blacks continues to be well sustained. Some slack in demand over the past few weeks has been reported but producers find this normal for this time of the year. Prices are steady, supplies adequate.

**Earth Colors**—Several of the earth colors are reported to have been raised an average of ¼ to 1c. per pound, effective September 1, by one leading producer. The producer reports that a new price schedule will be released shortly. But as of late last week the new schedule was not available. Reportedly, only the natural iron oxides will be advanced, while prices for the pure iron oxides of black, yellow and red will remain at their current listing. Also excluded are the synthetic iron oxides and the chromium reds.

Some of the colors that are reported to be listed in the new schedules are: Metallic browns; burnt siennas; raw umbers and raw siennas. The advances on these colors are reported to be of about ¼ to 1c. depending on the grade.

Other producers contacted by OPD are awaiting market developments before making any committments. The consensus would seem to indicate however, that the increases will be adopted by the industry.

Reason for the increases were attributed to higher cost in production, labor and raw materials.

**Phthalocyanine Blue**—According to the Tariff Commission, production of both alpha and beta modifications of phthalocyanine blue pigments totaled an estimated 380,581 pounds in June, compared to the 309,951 pounds reported for May. In its preliminary report on synthetic organic chemicals, US promotion on sales of toners and lakes, total 1959 production of phthalocyanine blue was 3,693 million pounds. Sales totaled 1,964 million pounds and were valued at $8,790 million. The average value per unit for alpha and beta modifications was $3.09. Alpha's value was set at $3.11 and beta at $3.07.

## Synthetic Resins

The following figures show sales in pounds for June with May's figures included for comparison, as reported by the Tariff Commission:

| Sales | May | June |
|---|---|---|
| Phenolic and other tar acid resins: | | |
| Molding resins | 15,739,940 | 15,550,523 |
| Laminating resins | 3 657,785 | 3,355,780 |
| Protective coating resins, unmodified, modified, except by rosin | 1,886,159 | 1,859,803 |
| Urea and melamine resins: Protective coating resins, straight modified | 2,394,202 | 2,372,119 |
| Vinyl resins: Total all types | 91,111,361 | 94,803,543 |
| Alkyd resins for protective coatings: | | |
| Phthalic anhydride types, unmodified | 9,037,397 | 10,329,220 |
| Modified with tar acids, rosin, and/or other materials, except styrene | 3,649,674 | 4,057,900 |
| Polybasic acid types except phthalic: | | |
| Unmodified | 314,610 | 422,876 |
| Modified with tar acids, rosin, and/or other materials except styrene | 362,477 | 337,337 |
| Rosin modifications for protective coatings: | | |
| Rosin, rosin esters, unmodified (ester gum, esterified with glycerol) | 868,393 | 929,841 |
| Esterified with other alcohols, pentaerythritol, glycols, etc. | 547,880 | 635,864 |
| Rosin, rosin esters, modified: | | |
| Modifications with phenolic and other tar acid resins | 2,007,977 | 2,139,926 |
| Modifications with maleic and fumaric acids | 2,234,257 | 1,994,160 |
| All other modifications | 3,819,056 | 5,196,592 |
| Coumarone-indene and petroleum polymer resins | 19,799,401 | 20,777,821 |
| Miscellaneous synthetic plastic and resin materials, including silicone resins | 21,334,424 | 22,727,739 |

**Zinc Oxide**—With stocks of the '60 autos at unusually high levels, there is talk in the trade that some cutbacks in the '61 models might be in the cards. Reports are that the auto makers are offering bonuses to dealers in efforts to move the unwanted models. So far, the bonus device is reported to be not very effective.

Since zinc oxide is used in certain automobile primers and finishes, and accounts for a good percentage of zinc oxide demand, this news from Detroit is not calculated to please producers.

House painting activity too, is not up to the levels expected for this time of the year. The overall effect on zinc oxide demand from these two major sources has tended to depress market conditions. Another month will tell the full story.

Production of lead-free and leaded zinc oxide in the United States in June totaled 13,400 tons, about 8 percent less than May and 16 percent below June, 1959, according to reports furnished by the Bureau of Mines. Output of lead-free zinc oxide declined 10 percent, while the leaded variety increased 20 percent.

Shipments of lead-free and leaded zinc oxide increased 4 percent, and 19 percent, respectively. Combined shipments increased 6 percent over May, 1960, but were 6 percent below June, 1959. Producers' stocks of lead-free and leaded zinc oxide decreased 5 percent and 21 percent.

## Lacquer Materials

**Plasticizers** — Production of dibutyl phthalate in June was 1,177,400 pounds, according to reports from the Tariff Commission. This represents a decrease of 853,549 pounds in output from May when production reached 2,030,951 pounds. Possible reason for the reduction in output of dibutyl phthalate can probably be found in the tight supply of phthalic anhydride. A few weeks ago reports indi-

—*Continued on page 63*


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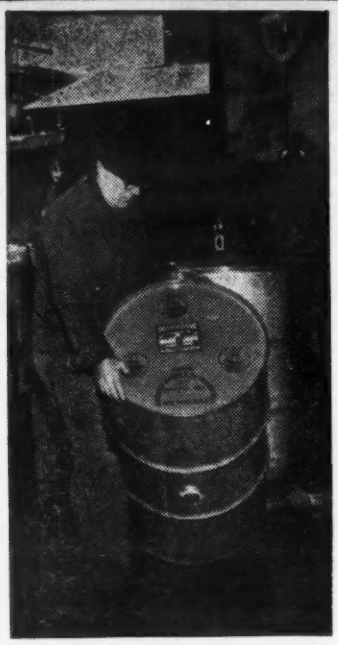

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# Essential Oils, Aromatics

Sluggish activity marked the pace of business last week. It was not wholly unexpected, however, as the pre-Labor Day week is normally one of diminished trading. Predictions are that activity will become brisk in the ensuing weeks as new crops approach and reach market and trading begins in earnest after a generally fallow August. Describing the present market it may be said that flavoring materials are slow and fragrance materials are starting to move well. Cosmetic houses are beginning to build inventory in preparation for the torrent of consumer demand which occurs each Christmas season. Demand from this area augers well for dealers.

In the current market advances along several lines were noted.

Citronella from Formosa advanced to $1.05 in the wake of storm damage while material from Ceylon remained stable.

Dillweed continued to display firmness as price advanced 5 cents to $4.75, with a report of $4.80 being given by one trader.

Sandalwood resumed its upward trend with increases of $1 to $1.50 bringing the price to a range of $22 to $22.50.

Spearmint prices declined on reports of new crop. Current spread is $3.75 to $4.50.

In seeds and spices conditions were no more active than in oils. General comments were on the downside with lack of offerings being noted on new crop Spanish paprika.

Clove stocks were reported poor. Ginger demand was indicated as slow. Nutmegs still await the upsurge of fall demand with prices nominally unchanged from last reports a week ago.

Demand for pepper was moderate last week with difficulties being encountered in buying large volume at competitive prices. Malabar and Lampong increased 1 cent to 57 cents.

Vanilla beans were quiet after price reductions the week before last. Bourbon material softened with a spread of $10.50 to $12 being noted. Trade comments are that FDA vanilla extract standards will be released shortly. In view of this, dealers are staying off the market until standards are published, feeling that demand and prices will be greater at that time.

Additional information is available concerning the rejection recently by the government of Madagascar of proposed controls on vanilla.

It is reported by the Vanilla Information Bureau in New York that the 60 cents per kilo tax on 1960 crop, starting January 1, 1961, is in addition to the current 12 percent ad valorem tax in effect for some time now.

The New York bureau expects that revenue from the new tax levy will be used to support the *Caisse de Stabilisation de Vanille* in Tananarive.

Also noted is the fact that the original proposals for government price supports and restricted exports met with strong opposition from US agents and importers. Protests forwarded to the island government apparently were influential in the Stabilization Board's decision to repect controls.

The following information is extracted from the Citrus Oils Report of the Agricultural Marketing Service of the Department of Agriculture.

Supplies of fresh oranges, now mostly California Valencias, continue moderately higher than a year ago. Remaining supplies in mid-August were down to about 7 million boxes.

The 1959-60 crop of California Valencia oranges was 18.5 million boxes, down 21 percent from the near-average 1958-59 crop.

Supplies of fresh oranges will continue seasonally light until fruit from the new crop, especially in Florida, becomes available in the fall.

On August 1, the condition of the 1960-61 orange crop in Florida and Texas was better than a year earlier, but in California and Arizona it was not as good, except for better condition of California Valencias.

Shipping point prices for the larger-sized California Valencia oranges have averaged higher this summer than last, chiefly the result of lighter supplies and continuing strong demand.

### Price Trends

**Advanced**

Dillweed, 25c. per lb.

**Reduced**

Sandalwood, $1 per lb.

**Comparative Price Indexes**

(100=1949 average)

| Last week | Prev. week | Last month | Sept. 4, 1959 |
|---|---|---|---|
| 145.62* | 145.97 | 145.96 | 147.34 |

* Revised.

*For Current Prices see page 9*

## Essential Oils

**Citronella** — Formosan material advanced last week while Ceylon remained stable.

Formosan material advanced to $1.05 confirming reports of early August storm damage and generally lower volume crops. Ceylone price remained at $1.

The history of the citronella industry on Formosa is an interesting one, according to published reference works. Beginning in 1912 with one root stock of citronella grass from Java, the industry grew under Japanese supervision until in 1940 360 metric tons of citronella oil was produced. The war, of course, diverted much of the material to domestic Japanese markets and the civil war in China in the post-war years did much to upset the industry on Formosa.

**Dillweed**—Market conditions continued to firm last week as evidenced by the increased prices quoted.

Material moved higher, advancing 25c. on the strength of reports of scarcity and seasonal high demand.

Current quotations are $4.75 with reports of $4.80 from one trader.

Demand is especially strong at this time of year as pickle packers are in the midst of packing. Dillweed oil is dispersed in brine and then used to flavor and preserve pickles.

**Geranium**—The nominal decline in price for bourbon material two weeks ago apparently did nothing to woo buyers into the market.

Prices are still considered too high for any significant activity to be achieved. At $28 for bourbon material dealers do not seem anxious to fight buyer opposition.

**Peppermint**—New crop is expected late this month. Meanwhile, price continues to hover around $4.50 with a range of $4.40 to $4.60 being encountered for natural.

Redistilled material is higher at $4.75 to $5.

How long these prices will remain at current levels is dependent, of course, on arrival of material from source in volume.

**Sandalwood**—After a one-week quietus the price of sandalwood returned to its recently followed upward trend.

Increases of $1 to $1.50 were quoted in the market making the current price range $22 to $22.50.

Reason for the advance was the higher prices being paid at auction of material at source. There have also been reports in conjunction with higher auction prices that volume of material is below expectations.

The state of Mysore in southern India and the island of Timor in the Indonesian Republic are the main sources of the world supply of sandalwood. The distilled oil has a long history as on the more popular perfume ingredients, a popularity which is undiminished to this day.

**Spearmint**—Prices continued to decline last week on arrival of new crop and indications that volume would be large.

Various traders reported prices in the range of $3.75 to $4.50 with the majority of quotes around $4.25.

## Seeds and Spices

**Cassias**—Interest for Batavias and Korintjes is indicated but below the current price levels.

Korintje "A" releaned is quoted at 32c., "B" at 31c. and "C" at 29 to 29½c.

**Cloves**—Poor stocks are reported as

*—Continued on page 53*

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# Essential Oils

—*Continued from page 50*

shipments are down due to firm levels abroad.

Madagascar and Zanzibar material are both quoted at 38c.

**Ginger**—One trade report indicates sluggish business as demand is down.

In the current market, Cochin material is quoted at 28c. to 29c. Jamaica #2 is 30c. to 32c. and #3 at 28c.

Nigerian split is quoted at 19c. to 20c. and material from Sierra Leone at 35½c.

**Nutmegs**—E. and W. Indian material still awaits start of fall demand.

W. Indian, whole, spot, is quoted at $1.28 to $1.29, unchanged from previous reports.

E. Indian spot prices continue at $1.35, while afloat prices are $1.32.

**Paprika**—One local trading house expressed concern last week over the lack of offering of new crop Spanish paprika. Local stocks are not large, it was reported, and new crop shipments may not reach market until November.

Following information appeared recently in a commercial information bulletin of the Federal Chamber of Foreign Trade of Yugoslavia.

Previous to the war paprika was exported from Yugoslavia in the form of sweet ground paprika. Only after the war, it is reported, did fresh paprika make it appearance in European markets. The product soon became popular and in view of Yugoslavia's increased production producers turned to canning.

The first variety to be canned was the "Pfefferoni," a hot variety. Soon to follow were marinated paprika fillets prepared in vinegar and oil from tomato paprikas.

Whole paprikas were also preserved in vinegar with the addition of spices. Included among the whole paprikas being canned are the normal Barbura type, the Tomato and the Sheephorn.

From a small beginning the Yugoslavian paprika caning industry has progressed to the point where paprika preserves of all types are being put up to suit the taste of European and, the bulletin soon hopes, American pallets.

**Pepper**—Trade demand was reported moderate last week with difficulty noted in attempts to purchase sizable quantities at competitive levels.

Reports from India reveal that heavy rains have caused damage to new crop and some estimates of production have accordingly been reduced.

Malabar and Lampong black pepper increased on spot 1c. from the previous week to 57c. Brazilian and Ceylonese material was variously quoted at 55c. to 56c.

Muntok white pepper moved at 82c. on spot while Brazilian was quoted at 81c. to 82c.

**Vanilla Beans**—Market conditions are quiet and described generally as declining in activity.

This situation is characteristic of this period of the year. There is an additional factor to be reckoned with, however—FDA. Trade talk is that the standards for vanilla extract will be released by FDA sooner than expected.

The term "sooner" is elastic and can be stretched to mean anything. Yet, on the strength of expected published standards, dealers are tending to hold material off the market. Reason, of course, is that they feel there will be greater demand for material when standards are published and, consequently, higher prices than now prevail.

Upshot of this wait-and-see attitude is a general lessening of market activity.

Currently, bourbon material is showing a price spread of $10.50 to $12, indicative of the indecisive nature of the market.

## Enjay's 'Buton' Line Commercially Available

Enjay Chemical Company is now turning out commercial quantities of its new "Buton" resins from two plants, located at Baton Rouge, La., and Bayonne, N. J.

Total capacity of the units initially will be 10 million pounds a year, but this can readily be expanded to several times that amount, Enjay, a division of Humble Oil & Refining Company, reports.

"Buton" resins, a new line based on butadiene-styrene polymers, reportedly offer surface coating manufacturers many advantages.

## Chemetron Purchases Weigel

Chemetron Corporation has completed negotiations for the acquisition of Charles J. Weigel, Inc., Detroit, Mich., a producer of specialty products for the printing ink industry, by an exchange of stock. The Weigel firm will operate under its present management and will become a part of Chemetron Chemical Products Division.

## *Potash Lode*

—*Continued from page 4*

feet deep) may have to be plugged with cement to prevent possible leakage of gas or oil into the mine.

For these and other technical reasons related to high rock pressures at such depths, Interior explains, it is not possible to develop the potash deposit fully and to continue drilling for oil and gas at the same time.

The quantity of oil and gas found in eighteen wells drilled through the potash deposits have not resulted in sustained production. However, Interior expects that once the potash has been mined out, further exploration for oil and gas deposits will be possible.

If at the end of ten years the potash development operations do not warrant continuation of the withdrawal, it will be revoked and the area will again be opened to oil and gas leasing.

Development of the area near Moab will take from $20 million to $30 million. The government will get as much as 5 percent royalty on the potash produced.

## *Nylon's Popularity*

—*Continued from page 5*

expected to come on stream during the first quarter of 1961 with 2,000 tons a year of capacity. The firm currently produces twenty-nine basic, semi-finished and finished products for the chemical, plastics and fiber industries. Among them are high-tenacity rayon tire cord and fabric.


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# Petroleum Derivatives

Cliffhanging — that's what trade observers were engaged in doing last Thursday on the basis of strong speculation concerning a fourth quarter benzene price increase. It was a case of *Waiting for Godot*, however, as the price change never materialized. Rumors had preceded the third quarter announcement date, too, but not with the conviction displayed by veteran tradesmen as September 1 approached. As the Labor Day weekend began producers still maintained a price of 34 cents on a contract basis.

Latest Tariff Commission figures, compiled for June, show benzene production down overall. Petroleum producers still turned out a creditable 25.5 million gallons, however.

Total from petroleum for the first half of 1960—145.4 million gallons.

Toluene production edged up in June on the strength of expected peak uses in motor feul and aviation gas. Xylene was off fractionally as metal finishing industries prepared for summer slowdowns.

Bureau of Mines 1959 annual report on lpg's shows an increase in sales of 20 percent over 1958. Greatest increase in use on a percentage basis, although still ranked low in volume, was in the secondary recovery of petroleum.

In the large volume uses, chemical and synthetic rubber applications were each up over 30 percent from the previous year.

Daily average production of natural gas liquids in June was 3 percent above June, 1959, according to Bureau of Mines.

Ethane-ethylene production in June was 21 percent above June, 1959. Daily average demand for liquefied gases for fuel and chemical use decreased 5 percent from June, 1959.

### Price Trends

**Advanced**
None

**Reduced**
None

**Comparative Price Indexes**
(100—1949 average)

| Last week | Prev. week | Last month | Sept. 4, 1959 |
|---|---|---|---|
| 103.74 | 103.74 | 103.74 | 103.04 |

*For Current Prices see page 9*

## Aromatic Solvents

**Benzene** — Contract price remained at 34¢ a gallon as of press time on Friday.

Surprised?

So are a lot of people. Strong rumors circulated in the trade for weeks previous to the September 1 contract notice deadline that a rise was in the offing for fourth quarter. Projected increase was variously estimated from 2c. to 6c.

Firm evidence was on hand, opined many in the trade, to support the propriety of a hike.

For one, benzene is a hot item, strong in demand both here and abroad. Considering the high export and spot prices paid on occasion it seemed plausible that producers would apply higher schedules sometime and fourth quarter was figured as *der tag*. Some trade spokesmen, wise in the ways of sophistry, claimed that a benzene price rise to the vicinity of 36c. would only return it to the level held in 1958 and therefore would not constitute a rise at all.

What made producers hold back is a question answerable by the producers only. However, conjecture is that with added facilities steadily coming on stream, or at least planned, producers might have felt reluctant to antagonize customers with a price rise at a time when competition shows signs of strengthening.

Production of benzene from all sources totaled 37,890,214 gallons in June.

By source, production was:

Petroleum producers—25,561,203 gallons, a decrease of 1,360,950 gallons from the previous month.

Cokeovens—11,012,961 gallons, a decrease of 1,931,650 gallons from May.

Tar distillers—1,316,050 gallons, an increase of 11,304 gallons from the previous month.

First half total for benzene from petroleum totals 145,397,596 gallons, and total from cokeovens 74,128,926 gallons.

**Toluene**—Opinion in the trade is that toluene remains firm for the present.

Calls have been well sustained throughout the summer from all consuming areas and should continue well into September as motor fuel and aviation gas maintain peak demands. Use in pesticides is off, naturally, except for formulations for use in fall crops.

One of the most important factors in assessing the picture for toluene is the fact that oil companies are turning more attention to benzene production at the cost of toluene. This has been one of the causes of toluene becoming firm in the last few months. With benzene in such great demand, both in the US and abroad, it is natural that producers are anxious to reap the added rewards that benzene production garners. A quick look at the relative prices of the two products is enough to convince anyone of the advantages of turning out benzene in favor of toluene.

As a result, some producers are converting toluene to benzene.

Considering all the speculation concerning an imminent price hike for benzene, it is not unfair to say that the trend to benzene and away from toluene will continue and increase.

Toluene production from all sources in June was 21,241,014 gallons, an increase of 1,325,291 gallons from May.

By source, production was:

Petroleum producers—18,363,625 gallons, an increase of 1,325,291 gallons from May.

Cokeovens—2,526,228 gallons, a decrease of 298,709 gallons from the previous month.

Tar distillers—351,153 gallons, an increase of 13,621 gallons from May.

**Xylene** production from all sources in June was 26,202,677 gallons, a decrease of 794,744 gallons from May.

By source, production was:

Petroleum producers—25,525,290 gallons, a decline of 822,712 gallons from May.

Cokeovens—677,387 gallons, a decrease of 27,966 gallons from the previous month.

## LPG's

Domestic sales of lpg's and ethane (excluding use in gasoline) totaled 8,919,000,000 gallons in 1959 according to a recent report by the Bureau of Mines. This was 20 percent higher than sales in 1958.

Sales for domestic and commercial use showed an increase of 20 percent in 1959 compared with a 7 percent increase in 1958.

Chemical and synthetic rubber uses each showed increases of over 30 percent.

Large miscible-phase displacement projects for the secondary recovery of petroleum raised this use by 235 percent.

Decreased sales in 1959 were reported for industrial use, refinery fuel use and for distribution through gas mains.

Shipments of lpg's for use in the production of gasoline amounted to 1,593,000,000 gallons in 1959 compared with 1,520,000,000 gallons in 1958. Lpg exports, as reported by Bureau of Census, declined 21 percent.

Total shipments of lpg's and ethane including sales, use in gasoline and exports, were 10,607,000,000 gallons, 16 percent more than in 1958.

All statistics include LR gases.

## Waxes

**Microcrystalline** — Demand continues high and reports of business are good, according to trade sources.

Prices remain firm without expectation of change.

Coating grades in tankcars, works, are listed at 10c. to 11c.

Laminating grades, same basis, 11c. to 12c.

### Crude Oil Stocks

Stocks of domestic and foreign crude petroleum at the close of the week ended Aug. 20 totaled 238,308,000 barrels, according to data reported by the Bureau of Mines. Compared with the total of 238,679,000 barrels the preceding week, this represents a decrease of 371,000 barrels, comprising a decrease of 792,000 barrels in stocks of domestic crude and an increase of 421,000 barrels in stock of foreign crude.

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AMMONIUM BIFLUORIDE—200 bgs, Bremen
AMMONIUM CARBONATE—50 cs, American Agricultural Chemical Co, Glasgow
100 cs, American British Chemical Supplies, Glasgow
AMYRIS OIL—1 dm, Dodge & Olcott, Port au Prince
4 dms, Olfactors Inc, Miragoane
a-ALANINE—2 dms, Mann Research Lab, Yokohama
ANILINE DYES—18 dms, Heemsoth Kerner, Liverpool
20 dms, Dye Specialties Inc, Liverpool
21 dms, Sandoz Inc, Havre
29 dms, Carbic Hoechst Corp, Rotterdam
88 dms, H Bruckmann & Lorbacher, Hamburg
126 dms, Rotterdam
ALUMINUM FORMATE—50 dms, Rotterdam
ANTIMONY OXIDE—736 bgs, National Lead Co, Hull
ARABIC GUM—200 bgs, Colony Import & Export Corp, Havre
504 bgs, Meer Corp, Port Sudan
609 bgs, Morningstar Paisley inc, Port Sudan
900 bgs, Port Sudan
ARSENIC, METALLIC—50 bbls, Kolon Trading Co, Skelleftehamn
6 bbls, Millmaster Chemical Corp, Skelleftehamn
ASBESTOS FIBER—11,700 bgs, N American Asbestos Corp, Lourenco Marques
3,100 bgs, Johns Manville Corp, Durban
ASCORBIC ACID—20 kgs, Copenhagen
13 dms, Genoa
BAUXITE RESIDUE—628 bgs, Reichard Coulston, Liverpool
BEESWAX—179 blks, J H Schroder, Djibouti
157 blks, Morgan Guaranty Trust Co, Assab
21 bls, Progreso
41 bbls, Cap Haitien
172 blks, Djibouti
BERGAMOT OIL—42 hf cs, Messina
BILE ACIDS—12 dms, Merck & Co, Buenos Aires
BOIS DE ROSE OIL—5 dms, Northam Trading Co, Callao
BRONZE POWDER—50 dms, Wm Recht Co, Hamburg
60 dms, Crescent Bronze Powder Co, Hamburg
CALCIUM CARBONATE—906 bgs, Whittaker Clark & Daniels, London
400 bgs, Hammill & Gillespie, Hull
1,200 bgs, Smith Chemical & Color Co, Middlesbrough
600 bgs, Puless Staufer, Antwerp
CAMPHOR OIL—15 dms, Magnus Mabee & Reynard, Yokohama
CANDELILLA WAX—188 bgs, Cornelius Wax Refining Corp, Tampico
313 bgs, Tampico
CARAWAY SEED—150 bgs, P H Petry, Rotterdam
CARNAUBA WAX—22 bgs, Wm Diehl & Co, Fortaleza
56 bgs, Cornelius Wax Refining Corp, Fortaleza
111 bgs, M Hassel Co, Fortaleza
112 bgs, J W Hanson Co, Fortaleza
56 bgs, Strohmeyer & Arpe, Fortaleza
279 bgs, Strahl & Pitsch, Fortaleza
CASEIN—414 bgs, Ponta Delgada
CASHEWNUT SHELL LIQUID—46 tons, Colloid Chemical Lab, Lourenco Marques
150 tons, Minnesota Mining & Manufacturing Co, Lourenco Marques
CASTOR OIL—250 tons, Salvador
CETYL STEARYL ALCOHOL—660 bgs, A & S Corp, Yokohama
CINNAMON LEAF OIL—6 dms, Fritzsche Bros, London
CITRONELLA OIL—5 dms, Lo Curto & Funk, London
CLAY—200 bgs, Transmares Corp, Rotterdam
CLAY, BALL—1,350 bgs, United Clay Mines Corp, Avonmouth
CLAY, CHINA—1,796 bgs, Anglo American Clays Corp, Avonmouth
CLOVE—200 bgs, Fritzsche Bros, Tamatave
300 bgs, M J Golombeck, Tamatave
200 bgs, K H Landes & Co, Tamatave
50 bgs, Otto Gerdau, Tamatave
50 bgs, Meer Corp, Tamatave
600 bgs, L A Champon & Co, Tamatave
100 bgs, Tamatave
15 dms, George Lueders & Co, Tamatave
91 dms, Fritzsche Bros, Tamatave
5 dms, R D Webb & Co, Tamatave
37 dms, Givaudan Corp, Tamatave
9 dms, S B Penick & Co, Tamatave
CLOVE LEAF OIL—23 dms, Fritzsche Bros, Tamatave
COCONUT OIL—140 tons, Fallek Products Co, Rotterdam
COCONUT OIL FATTY ACID—25 dms, Carter Products Inc, Hull
COCONUT SHELL CARBON—300 bgs, Connor Engineering Corp, London
CODLIVER OIL—200 dms, Chase Manhattan Bank, Bremen
COPAL GUM—140 bgs, Morgan Guaranty Trust Co, Lisbon
CORN STARCH—963 bgs, Rotterdam
m-CRESOL—3 dms, Riches Nelson, Hamburg
3 dms, Riches Nelson, Rotterdam
CRESYLIC ACID—25 tons, Midland Tar Distillers, Liverpool
CUMIN SEED—300 bgs, C M Van Sillevoldt, Khorramshahr
100 bgs, Khorramshahr
DEGRAS—72 cs, Silvey Shipping Co, Liverpool
53 dms, H A Gogarty, Kobe
DEXTRIN—285 bgs, Manufacturers Trust Co, Rotterdam
DICYANDIAMIDE—500 bgs, Hudson Shipping Co, Yokohama
DIMETHYLUREA—68 dms, Philipp Bros Chemicals, Bremen
DUBOISIA LEAVES—2 bls, Meer Corp, Sydney
DYES, COALTAR—17 dms, Organic Chemical Corp, Hong Kong
9 dms, Toms River Cincinnati Chemical Corp, Rotterdam
8 dms, C A Haynes, Rotterdam
29 dms, Orlex Dyes & Chemical Corp, Hamburg
186 dms, H Bruckmann & Lorbacher, Hamburg
EARTH COLORS—101 bgs, Chemical Bank, Rotterdam
600 bgs, Naftone Inc, Bremen
450 bgs, Bremen
EUCALYPTUS OIL—28 dms, Fries Bros, Sydney
FISHLIVER OIL—30 dms, Mitsubishi Corp, Yokohama
10 dms, Wilbur Ellis Co, Yokohama
24 dms, Consumers Import Co, Yokohama
12 dms, Chase Manhattan Bank, Yokohama
5 dms, Interocean Chemical & Minerals Corp, Yokohama
FLUORANTHENE—28 dms, F L Kraemer, Rotterdam
FUEL OIL—134,595 bbls, Shell Caribbean Petroleu Co, Punta Cardon
120,549 bbls, Asiatic Petroleum Co, Punta Cardon
127,933 bbls, Metropolitan Petroleum Corp, Puerto La Cruz
115,012 bbls, Hess Inc, Punta Cardon
313,028 bbls, Signal Oil & Gas Co, Aruba
117,369 bbls, Shell Caribbean Petroleum Co, Curacao
FURFURAL—894 tons, E I Dupont De Nemours & Co, La Romana
GALLNUTS—500 bgs, Balmore & Co, Beirut
GELATIN—2 bbls, Coignet Chemical Co, Antwerp
300 bgs, T M Duche & Sons, Antwerp
260 bgs, United Hat Fur Cutting Co, Leghorn
600 bgs, Corbett & Co, Marseille
420 dms, Corbett & Co, Marseille
200 dms, Franco Belgian Corp, London
160 bgs, Royal Bank of Canada, Havre
100 cks, Havre
GERANIUM OIL—4 cks, A Verley & Co, Marseille
GERMANIUM CONCENTRATE—16 bbls, Bremen
GLUE, BONE—1,800 bgs, Hamburg
GLUESTOCK—196 bls, Barranquilla
GRAPHITE—600 bgs, Joseph Dixon Crucible Co, Bremen
2,000 bgs, C Pettinos, Tamatave
1,200 bgs, Joseph Dixon Crucible Co, Tamatave
250 bgs, J E Potter Co, Tamatave
270 bgs, Bankers Trust Co, Tamatave
GYPSUM, CRUDE—31,203 tons, U S Gypsum Co, Hantsport
HYDROXYCITRONELLAL—5 cks, George Uhe Co, Marseille
8-HYDROXYQUINOLINE — 6 cks, Polychemical Corp, Rotterdam
IRON OXIDE—400 bgs, F D Davis Co, London
ISCOWAX—20 bgs, Hostawax Co, Hamburg
JAPAN WAX—50 cs, Strohmeyer & Arpe, Kobe
25 cs, Frank B Ross, Kobe
JUNIPER OIL—2 dms, International Flavors & Fragrances Inc, Rijeka
KELPMEAL—220 bgs, Skod Co, Kristiansund
KOLA NUTS—200 bgs, D Steengrafe & Co, Kingston
LACTIC ACID—50 dms, A Millner & Co, Liverpool
LEAD, WHITE—480 bgs, Rotterdam
LEMONGRASS OIL—35 dms, Lo Curto & Funk, Puerto Barrios
LICORICE ROOT—242 bls, Wm E Martin & Son, Piraeus
LITHARGE—40 bgs, Rotterdam
LOCUST BEAN GUM—300 bgs, Paul A Dunkel, Rotterdam
LOGWOOD EXTRACT—45 dms, American Dyewood Co, Kingston
MACE—10 cs, C Czarinkow, Singapore
10 cs, A G Dunn, Singapore
MAGNESIUM CARBONATE—25 cs, Chas L Huisking & Co, Genoa
MARINE OIL COMPOUND—400 bgs, Silvey Shipping Co, Oslo
MENTHOL—120 cs, American Far Eastern Syndicate, Santos
150 cs, Mitsui & Co, Santos
MERCURY—75 flks, Lo Curto & Funk, Tampico
MINERAL LUBRICATING OIL—25 cs, N Y & N J Lubricant Co, Glasgow
MOLASSES—555 tons, W R Grace & Co, Salaverry
MONOCHLOROACETIC ACID—30 dms, Orlex Dyes & Chemical Corp, Bremen
MONTAN WAX—10 bgs, Dura Commodities Corp, Rotterdam
MUSK, ARTIFICIAL—5 dms, Roure-Dupont Inc, Rotterdam
NAPHTHALENE—540 bgs, Allied Chemical Corp, Hull
402 bgs, J H Forker, Middlesbrough
137 bgs, Witco Chemical Co, Middlesbrough
NAPHTHENIC ACID—136 dms, Imperial Oil Co, Barranquilla
NICKEL ACETATE—90 bgs, Chemical Sales & Service, Bremen
NICKEL FORMATE—30 bgs, Chemical Sales & Service, Bremen
NITRO-p-TOLUIDINE—8 dms, A V Berner & Co, Liverpool
NUTMEG—270 bgs, K H Landes & Co, Grenada
50 bgs, Gillespie & Co, Grenada
140 bgs, National City Bank, Rotterdam
25 bgs, Lo Curto & Funk, Rotterdam
OITICICA OIL—200 tons, Brazilian Industrial Oils Inc, Fortaleza
75 dms, Brazilian Industrial Oils Inc, Fortaleza
250 tons, Irving Trust Co, Fortaleza
OLIVE OIL—486 dms, National City Bank, Seville
50 dms, Atlantic Bank of N Y, Seville
50 dms, Bankers Trust Co, Seville
25 dms, Old Monk Olive Oil Co, Marseille
98 dms, Uddo & Taormina, Barcelona
60 dms, Seville
ORANGE OIL, SWEET—126 dms, Ungerer & Co, Belize
OREGANUM OIL—2 bbls, Beirut
OXBILE—21 dms, Merck & Co, Durban
8-OXYCHINOLIN—2 cks, R S A Corp, Rotterdam
PALMKERNEL OIL—303 tons, E F Drew & Co, Rotterdam
220 tons, Matadi
PAPAIN—63 cs, Rohner Gehrig, Mombasa
20 cs, Paul Lewis Lab, Mombasa
100 cs, Meer Corp, Mombasa
102 cs, Bemo Shipping Co, Mombasa
PAPRIKA—100 bgs, National City Bank, Hamburg
PEATMOSS—2,300 bls, E Dunwoody, Bremen
5,050 bls, E J Lang, Bremen
1,500 bls, Bruco Peatmoss Corp, Bremen
1,500 bls, Ascot Peatmoss Corp, Bremen
3,000 bls, Premier Peatmoss Corp, Bremen
1,000 bls, E J Lang, Hamburg
2,775 bls, Garden Supply Co, Bremen
3,000 bls, Marine Midland Trust Co, Bremen
1,400 bls, New Amsterdam Import Co, Bremen
PECTIN—30 dms, T M Duche & Sons, Copenhagen
PEPPER, RED—137 bgs, Mombasa
PEPPERMINT OIL—30 cs, Mitsui & Co, Santos
PETROLEUM, CRUDE—75,692 bbls, California Oil Co, Maracaibo
195,000 bbls, Mobil Oil Co, Puerto La Cruz
79,922 bbls, Humble Oil Co, La Salina
123,401 bbls, Gulf Oil Corp, Puerto La Cruz
121,946 bbls, Ashland Oil & Refining Co, La Salina
189,006 bbls, Phillips Petroleum Co, La Salina
100,900 bbls, Cosden Petroleum Co, Puerto La Cruz
PIMENTO—16 bgs, Kellys America Ltd, Kingston
PIMENTO LEAF OIL—3 dms, Norda Essential Oil & Chemical Co, Kingston
POLLACKLIVER OIL—50 dms, Mitsubishi Corp, Yokohama
360 dms, Peder Devold Oil Co, Yokohama
150 dms, F B Wilcon Co, Yokohama
POPPYSEED—200 bgs, Chase Manhattan Bank, Izmir
350 bgs, C M Van Sillevoldt, Izmir
POTASH, CAUSTIC—108 dms, B T Chemco Inc, Gothenburg
POTASSIUM CYANIDE—100 dms, Ugine Industries, Havre
POTASSIUM PERCHLORATE—136 dms, Ugine Industries, Havre
PYRETHRUM EXTRACT—15 dms, McLaughlin Gormley King Co, Dar es Salaam
PYRITES—258 cks, American Metal Climax, Leixoes
QUASSIA CHIPS—370 bgs, S B Penick & Co, Kingston
QUEBRACHO EXTRACT—11,770 bgs, American Tanners Ltd, Buenos Aires
525 bgs, Tanimex Corp, Buenos Aires
6,646 bgs, Barkey Importing Co, Buenos Aires
1,500 bgs, International Products Corp, Buenos Aires
QUININE SULFATE—18 cs, American Roland Co, Hamburg
RICE STARCH—200 bgs, American Key Products, Trieste
ROMARIN OIL—1 ck, A Verley & Co, Marseille
ROMONTA WAX—500 bgs, Cornelius Wax Refining Corp, Hamburg
RUTILE SAND—3,100 bgs, International Titanium Corp, Brisbane
RUTIN—14 dms, Meer Corp, Melbourne
30 dms, S B Penick & Co, Sydney
SACCHARINE—31 kgs, Baird Chemical Industries, Kobe
SAGE LEAVES—320 bls, K H Werthon, Trieste
SARSAPARILLA ROOT—67 bls, F D Keller & Son, Tampico
SESAME OIL—20 cs, Bohea Trading Co, Kobe
SESAME SEED—500 bgs, Louis Furth, Beirut
SHELLAC—200 bgs, Mantrose Corp, Bremen
SODIUM BOROHYDRIDE—3 cs, Callery Chemical Co, Hamburg
SODIUM CYANIDE—250 dms, Chemical Manufacturing Co, Middlesbrough
210 dms, American Cyanamid Co, Middlesbrough
600 dms, Chemical Manufacturing Co, Liverpool
300 dms, Ugine Industries, Havre
SODIUM CYCLAMATE—40 dms, Foster T Smith, Yokohama
SODIUM LAURYL SULFATE—10 cks, Liverpool
SODIUM NAPHTHIONATE—20 dms, Kaufman & Vinson, Kobe
SODIUM THIOSULFATE—400 bgs, Chemical Manufacturing Co, Liverpool
STARCH—20 bgs, Connell Rice & Sugar Co, Bremen
TALLOW, VEGETABLE—24 bgs, Cape Town
TAMARINDS—9 bbls, Meer Corp, Port au Prince
TAPIOCA FLOUR—220 bgs, Dutch American Corp, Lome
TARTARIC ACID—70 bgs, Byron Chemical Co, Palermo
950 bgs, Leonhardt & Brush, Barcelona
TEA TREE OIL—5 dms, Norda Essential Oil & Chemical Co, Sydney
TITANIUM DIOXIDE, RUTILE—3,307 bgs, Havre
TUNG OIL—199 tons, Bunge Corp, Buenos Aires
208 tons, Internatio Rotterdam, Buenos Aires
199 tons, Buenos Aires
ULTRAMARINE BLUE—660 bgs, Whittaker Clark & Daniels, Hull
21 dms, Whittaker Clark & Daniels, Hull
UREA—1,500 bgs, Nylos Trading Co, Genoa
UREA, SYNTHETIC—1,984 bgs, Chemical Manufacturing Co, Liverpool
VANILLA BEANS—44 cs, L A Champon & Co, Mombasa
48 cs, Zink & Trieste, Marseille
VETIVER OIL—1 dm, George Lueders & Co, Tamatave
4 dms, Centflor Manufacturing Co, Tamatave
3 dms, Ufinindo International Corp, Tamatave
WATTLE BARK—2,138 bls, Bowring & Co, Cape Town
WATTLE EXTRACT—409 bgs, International Products Corp, Durban
WAX—40 bgs, A Fahner, Hamburg
WAX, SYNTHETIC—2,500 bgs, Moore & Munger, Durban
YLANG YLANG OIL—2 dms, International Flavors & Fragrances Inc, Tamatave
ZINC OXIDE—300 cs, C B Chrystal Co, Marseille
ZINC PHOSPHIDE—5 dms, Interstate Universal Inc, Bremen
ZIRCON SAND—3,572 bgs, Lo Curto & Funk, Brisbane
3,600 bgs, International Titanium Corp, Brisbane
1,990 bgs, Brisbane

## Los Angeles

AGAR—13 dms, Barcelona
BONEMEAL—1,010 bgs, Wilbur Ellis Co, Genoa
CASSIA—125 bls, Hismoco American Co, Saigon
125 bls, H M Newhall & Co, Saigon
167 bls, Djakarta
CLAY, CHINA—2,212 bgs, London
COPRA—742 tons, American Trust Co, Tacloban
500 tons, Cargil Inc, Tacloban
1,000 tons, Hondagua
DEXTRIN—100 bgs, Arabol Manufacturing Co, Amsterdam
30 bgs, Stein Hall & Co, Rotterdam
GUAR GUM—700 bgs, Hathaway Allied Products, Genoa
LOCUST BEAN GUM—100 bgs, Hathaway Allied Products, Genoa
MATTE TEA—100 cs, Parnauga
MOLASSES—2,773 tons, S Western Sugar & Molasses Co, Hinigaran
NUTMEG—28 bgs, J H Elton, Singapore
OLIVE OIL—50 dms, Cadiz
PETROLEUM, CRUDE—75,452 bbls, Golden Eagle Refining Co, Maracaibo
295,660 bbls, Wilshire Oil Co, Bandar Mashur
198,351 bbls, Texaco Co, Dumai
QUEBRACHO EXTRACT—895 bgs, H J Schulter, Buenos Aires
310 bgs, Barkey Importing Co, Buenos Aires
SODIUM NITRATE—1,376 tons, Tocopilla
TAPIOCA FLOUR—3,224 bgs, Morningstar Paisley Inc, Bangkok
100 bgs, Bangkok
TUNG OIL—144 tons, Bunge Corp, Buenos Aires
UMBER—90 bgs, F D Davis Co, Trieste

## Philadelphia

ANTIMONY—80 cks, N Trotter Co, Liverpool
ANTIMONY OXIDE—787 bgs, National Lead Co, Liverpool
2,000 bgs, Glasgow
ASBESTOS FIBER—712 bgs, Keasby & Mattison, Manchester
960 bgs, Keasby & Mattison, Liverpool
BONEMEAL—1,133 bgs, Vellman Corp, Buenos Aires
CALCIUM CHLORIDE—6,000 bgs, Pluess Staufer, Antwerp
3,220 bgs, Antwerp
CRESYLIC ACID—104 dms, Concord Chemical Co, Glasgow
GYPSUM, CRUDE—11,692 tons, National Gypsum Co, Halifax
6,300 tons, U S Gypsum Co, Hantsport
HEXANOL—120 dms, Hamburg
MAGNESIUM OXIDE—800 bgs, Darlington Chemicals Inc, Liverpool
MENTHOL—85 cs, Vick Chemical Co, Santos
MOLASSES—16,222 tons, Manati
NAPHTHALENE—2,492 bgs, Allied Chemical Corp, London
OLIVE OIL—50 dms, Manufacturers Trust Co, Barcelona
PEATMOSS—2,200 bls, New Amsterdam Import Co, Aarhus
QUEBRACHO EXTRACT—1,095 bgs, Buenos Aires
RUTILE SAND—2,000 bgs, Import Export Industries, Sydney
1,020 bgs, Frank Samuel & Co, Brisbane
SODIUM BICARBONATE—500 bgs, Chemical Manufacturing Co, Liverpool
SODIUM CYANIDE—250 dms, Chemical Manufacturing Co, Liverpool
TAPIOCA FLOUR—2,643 bgs, Bankers Trust Co, Kohsichang
TRICHLOROETHYLENE—20 dms, Chemical Manufacturing Co, Liverpool
VANILLA BEANS—57 cs, Zink & Trieste, Vera Cruz
ZINC OXIDE—800 bgs, Pigment & Chemical Co, London
ZIRCON SAND—4,949 bgs, Chemical Bank, Brisbane

## San Francisco

ALUMINUM SULFATE—150 bgs, C M C Chemicals, Manchester
ASBESTOS FIBER—2,000 bgs, Johns Manville Corp, Capetown
5,158 bgs, Keasby & Mattison, Lourenco Marques
720 bgs, N American Asbestos Corp, Durban
CALCIUM CHLORIDE—100 bgs, Solvay & Co, Antwerp
CASEIN—120 bgs, Borden Co, Buenos Aires
CLOVE—80 bgs, California Commodities Corp, Zanzibar
COPPER CYANIDE—40 dms, C M C Chemicals, Manchester
DEGRAS—101 dms, Croda Inc, Manchester
DEXTRIN—84 bgs, Adhesive Products, Amsterdam
240 bgs, Arabol Manufacturing Co, Amsterdam
EARTH COLORS—3,375 bgs, Naftone Inc, Bremen
FISHMEAL—4,348 bgs, Albumina Supply Co, Iquique
2,158 bgs, Marine & Animal By Products, Talcahuana
7,173 bgs, Marine & Animal By Products, Arica
2,174 bgs, Marine & Animal By Products, Callao
FUEL OIL—50,000 bbls, Texaco Co, Point a Pierre
GLUE—200 bgs, B Young, Manchester
60 bgs, Hostachem Corp, Bremen
IRON OXIDE—500 bgs, F D Davis Co, Bremen
LOCUSTBEAN GUM—150 bgs, Stein Hall & Co, Genoa
PALMKERNEL OIL—138 tons, Durkee Famous Foods, Matadi
PAPAIN—80 cs, N R Martin & Sons, Matadi
PERCHLOROETHYLENE—75 dms, International Selling Corp, Marseille
PETROLEUM, CRUDE—210,893 bbls, Standard Oil Co, Dumai
28,643 tons, Tidewater Oil Co, Mina Saud
37,047 tons, Tidewater Oil Co, Mina Al Ahmadi
POLYVINYL ALCOHOL—320 bgs, Marubeni Iida Co, Kobe
RICE STARCH—150 bgs, American Key Products, Amsterdam
SODIUM BICARBONATE—1,050 bgs, C M C Chemicals, Manchester
SULFAMIC ACID—10 dms, P W Bellingall, Yokohama
TALC—500 bgs, Charles Mathieu, Genoa

# Trade Name Chemicals & Specialties

Synthetic detergents, or syndets as they are often called, have continued to make inroads into soap sales. It is generally felt the synthetics will continue to forge ahead of soaps, although the detergent that could replace soap completely is not yet in sight. In the synthetic detergent field itself, liquid products have been gaining an increasingly large share of the overall market at the expense of powder forms. Sales of liquid syndets this year, according to one estimate, are expected to amount to about 620 million pounds as against approximately 150 million pounds five years ago.

Anionic surfactants are by far the largest volume materials produced in this field and in this category the alkyl aryl sulfonates have continued to forge ahead of others. This group formed the first economical synthetic detergents and have remained dominant in the market. They were first introduced commercially in this country in the 1930's, although the basic idea of alkylation of an aromatic nucleus followed by sulfonation goes back to the period immediately after World War I. In the past thirty years a whole host of new alkyl aryl sulfonates have been marketed under various tradenames.

Cationics (quaternary ammonium compounds) have not developed as extensively due to their higher cost and the fact that the cationics are much more effective as germicides. The latter end-use forms the largest outlet for cationics so that application as surfactants has not been as thoroughly developed as might otherwise have been the case.

Among the fastest growing synthetic detergents are the nonionics. These materials show good detergency and will not react with common impurities in water. In addition, although anionics and cationics will work against each other, nonionics are compatible with either of these. This is a major advantage of nonionics.. They are compatible with many materials which react with and precipitate other surfactants.

General Mills recently announced price reductions in the company's liquid **"Versamid 125"** and **"140"** polyamide resins. The reduction on both products amounted to 10 cents a pound in carload or truckload and less carload quantities. An allied product, **"Genamid 250,"** was reduced 2 cents a pound for the same quantities. Improvements in production and handling methods as well as increased interest in these resins were cited as reasons for the declines.

Oronite Chemical Company announced a ½ cent increase in **"Alkane 56"** and **"60,"** effective October 1. The company points out that this is the first advance in four years on the company's dodecylbenzene detergent alkylate products despite the steady rise in costs.

### WHAT'S REPORTED ON HERE

Though coverage in the Trade Name Chemicals & Specialties market report encompasses twenty classes of chemicals, only a few of them are mentioned in this issue. Here's the entire list:

Adhesives, antibacterials and fungicides, antifoaming agents, antioxidants, antistatic agents, blowing agents, catalysts and accelerators, chelating agents, chemically processed oils, emulsions and latexes, enzymes, fatty acid derivatives, feed supplements, filtering materials, ion exchange resins, surfactants, synthetic waxes, textile chemicals, thickening and suspending agents, and ultraviolet absorbers.

If you have suggestions for any additional materials that might be included in this section, write OIL, PAINT AND DRUG REPORTER'S Technical Editor, 30 Church street, New York 7.

## Surfactants

Although they may differ widely in chemical composition, all surface active agents have one property in common. Their molecules are composed of a hydrophobic or water-hating part and a hydrophilic or water-clinging part. The hydrophobic end of the molecule usually consists of an extended hydrocarbon chain while the hydrophilic portion is generally sodium sulfate or a sulfonate radical.

Further classification is possible if the manner in which the compound ionizes is considered. If the water-hating hydrocarbon ionizes acquiring a negative charge, the surfactant is termed anionic. If it acquires a positive charge on ionization, the compound is a cationic. Non-ionics are surface active agents in which the hydrophilic portion of the molecule consists of weakly ionized groups.

These nonionics are among the fastest growing syndets. They exhibit good detergent characteristics and do not react with common impurities in water. In addition, whereas mixtures of anionics and cationics work against each other, the nonionics are compatible with either of these.

By far the largest volume of surface active agents produced are anionics and the group includes fatty alcohol sulfates, esters and amides of fatty acids and the alkyl aryl sulfonates. The latter make up the bulk of the synthetic detergents market, largely by reason of economy. Syndets as a class are expected to continue moving ahead of soaps as surface active agents because they are less expensive, easier to use with less work, and because the raw materials for soap production are potentially more valuable as foodstuffs.

The trend in recent years has been toward the use of liquid detergents in household cleaners over the solid type. Some sources estimate that sales of liquid products this year will amount to about 620 million pounds as against 150 million pounds barely five years ago. Most striking growth of the liquid products has developed in all-purpose household cleaners of the "Mr. Clean" and "Lestoil" variety. Sales for this use will probably exceed 90 mililon pounds this year. However, dishwashing compounds take the bulk of the market with sales estimated at more than half a billion pounds this year. Probably the simplest answer to rapid growth of liquid detergents is the fact that they are easy to use and give a maximum of cleaning power with a minimum of work

The alkyl aryl sulfonate type of detergent was first introduced commercially in this country in the 1930's, although the basic idea of alkylation of an aromatic nucleus followed by sulfonation goes back to the period immediately following World War I.

During the past thirty years, a large number of alkyl aryl sulfonates have been marketed for use as synthetic detergents. Prominent among these are the **"Naconols"** of National Aniline, the **"Santomerse"** products of Monsanto Chemical Company, and the **"Ultrawets"** of Atlantic Refining Company.

The **"Santomerse"** surfactants of Monsanto are anionic compounds based on alkyl benzenes and are supplied in a variety of forms. **"Santomerse No. 1"** is the company's all-purpose surface active agent manufactured in flake, granule or powder form, while special purpose products are supplied as highly concentrated flakes, liquid, paste, and special hydrotropic flakes. The hydrotropic flakes may be used as solubilizing agents for other surfactants used in liquid formulations.

**"Santomerse No. 1"** was developed for all-purpose work in detergent and wet-processing applications or for dry-blending or repackaging. Sodium sulfate is present as a neutral builder thus providing a synergistic effect with the active, and allowing lower active concentrations to be used than would be the case if the sulfate were absent.

**"Santomerse 85"** is a concentrated flake product ideal for applications requiring high surface activity and cleaning action in low surfactant concentration, and also for cleaning compounds designed around unusually high "builder" content as in abrasive cleaners, for example.

The use of builders stems from soap manufacture where alkaline salts are used to raise surface activity. Neutral salts, such as sodium sulfate, are not useful

—Continued on page 62


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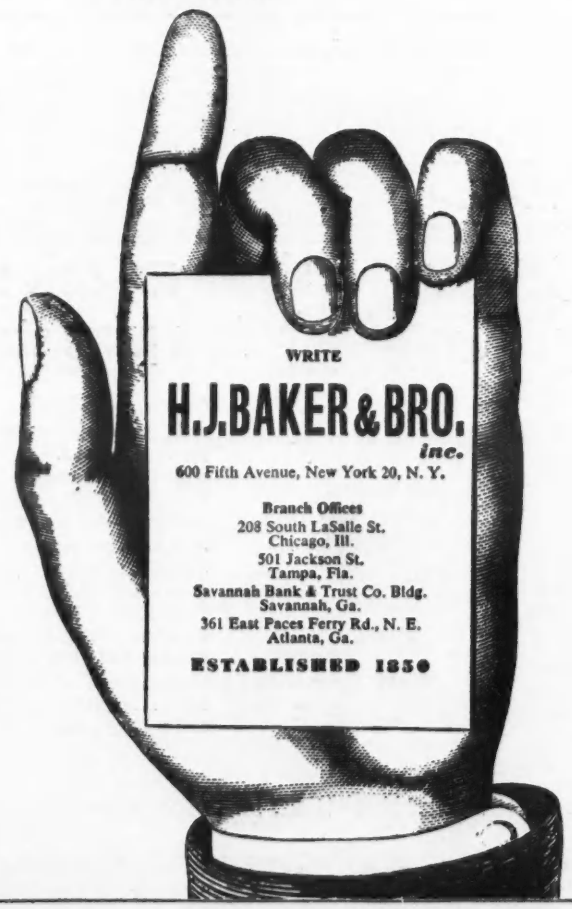



# Oils, Fats and Waxes

Weakness in edible oils continued to feature the oils and fats market last week. Led by soybean oil the market was lower and cottonseed, peanut and soybean oil declined at least ¼ cent per pound, while corn oil remained steady and unchanged. Trading was at low ebb for edible as well as industrial oils which is usual during pre-Labor Day holidays. Crude coconut oil also was irregular, the market closing fairly steady and unchanged. Copra was slighly easier, with trading at $1.50 per ton lower.

Lard market also was lower, with cash lard dropping about 1 cent per pound. This weakness was reflected in edible animal oils.

Light trading took place in tallow and greases. Soapers remained on the sidelines and what business passed was for specialty buyers account. Prices were unchanged but buyers kept bids below asking prices. Edible tallow declined fractionally due the sharp break in lard.

Weakness in flaxseed resulted in lower prices for linseed oil. Crushers reduced the price schedule ½ cent per pound for all positions. While new business was quiet, a good demand continued against existing contracts. There was little doing in other industrial oils. Tung oil was quiet and shadable. The same condition applied to Brazilian castor oil. Oiticica oil inactive but sellers held quotations at former levels. Rapeseed oil moved in hand to mouth manner. Interest in crude menhaden oil was slow. Fishing operations were restricted because of liberal inventories of fishscrap and meal held by producers.

Firm tone continued in soybean meal. Unrestricted delivery was advanced $2 per ton. Crushers mainsale meal was available at $1 per ton less.

## Price Trends

**Advanced**

Beeswax, crude, African, 2c. per lb.
Soyabean meal, $1 per ton

**Reduced**

Copra, $2.50 per ton.
Corn oil foots, 95%, ⅛c. per lb.
Cottonseed oil, crude, ¼c. per lb.
Refd., ¼c. per lb.
Lard, cash, 9.10c. per lb.
Linseed acid, ½c. per lb.
Linseed meal, $1 per ton
Linseed oil, ½c. per lb.
Peanut oil, crude, ¼c. per lb.
Refd., ¼c. per lb.
Soybean oil foots, 95%, ⅛c. per lb.
Soybean oil, crude, ⅜c. per lb.
Refd., ⅜c. per lb.
Tallow, edible, ⅛c. to ½c. per lb.

**Comparative Price Indexes**

(100=1949 average)

| Last week | Prev. week | Last month | Sept. 4, 1959 |
|---|---|---|---|
| 108.93 | *109.08 | 107.83 | 11.86 |

* Revised.

*For Current Prices see page 9*

## Vegetable Oils

**Castor**—Trading was reported slow. Market was unchanged. No. 1 Brazilian ranged from 18¾c. to 19c. per pound, tankcars, New York, prompt delivery. Domestic oil was quiet and unchanged.

Production of castor beans in Thailand in 1960 is expected to exceed 40,000 tons compared to 39,000 tons output in 1959. The increase resulted from strong demand and the government's program which has improved yield and quality. Castor beans export in the first half of 1960 amounted to 18,059 tons and exports for the year are expected to equal the record of 34,647 tons of 1959. Japan, the principal buyer will purchase about 27,934 tons the total taken last year.

Imports of castor beans and castor oil at New York and Philadelphia last week were as follows:

| | Pounds | |
|---|---|---|
| | Castor Beans | Castor Oil |
| Last week | ..... | 500,000 |
| Previous week | ..... | 1,958,000 |
| Corresponding week, 1959 | ..... | 1,450,000 |
| Total this year | 3,342,500 | 62,254,000 |
| Corresponding period, 1959 | 18,852,850 | 65,332,000 |

**Coconut**—Crude market was inactive and irregular. Nearby was quoted at 12⅜c. per pound, tankcars, f.o.b. Pacific coast and 12¼c., October. The New York market was quiet, with tankcars at 14½c. per pound, prompt delivery.

**Corn**—This market was steady. Crude was sold at 12c. per pound, tankcars, f.o.b. mills, prompt delivery. Refined oil was unchanged at 15.73c., tankcars, New York basis.

**Cottonseed**—Futures backed and filled closing slightly lower on the New York Produce Exchange last week. Market was unsettled with the weakness of soybean oil and lard. Trading was moderate, chiefly professional. There were no September last week. Weather conditions were satisfactory in the cotton belt. Cash oil was easier with cheaper crude. Refined salad oil declined to 12¾c. per pound, tankcars, New York, prompt delivery.

### Cottonseed Oil Futures

Sales and prices of prime summer yellow cottonseed oil futures in tankcars (60,000 pounds) on the N. Y. Produce Exchange for the week ended Friday, September 2, follow:

| | Sales | High | Low | Close |
|---|---|---|---|---|
| | | Cents per Pound | | |
| Sept. | 254 | 11.63 | 11.51 | 11.55S |
| Oct. | 157 | 11.58 | 11.47 | 11.55S |
| Dec. | 237 | 11.53 | 11.36 | 11.43@11.46 |
| March | 210 | 11.62 | 11.46 | 11.52S |
| May | 247 | 11.62 | 11.47 | 11.53S |
| July | 56 | 11.61 | 11.49 | 11.54S |
| Sept., 1961 | 2 | 11.47 | 11.45 | 11.42@11.46 |

Total sales and switches, 1,163 contracts.

Disappearance of refined cottonseed oil in July totaled 1,905 tankcars against 1,479, July last year. Total for the 1959-60 season ending July amounted to 27,608 tankcars against 23,299 for the previous season. Visible supply at end of July was estimated at 5,321 tankcars compared with 4,058 a year ago.

Trading in crude oil was moderate, chiefly for 30-60 day shipments. Market was easier. Tankcars were sold at 9⅝c. per pound, tankcars, mills in the Valley and southeast for September-October shipments and offered at 9¼c. to 9½c. for November-December. Waco was also quoted at 9⅝c., mills.

The Department of Agriculture has announced an agreement with the Republic of China to provide for the sale of about 3 million pounds of cottonseed or soybean oils under PL 480. Purchase authorizations will be issued later.

**Linseed**—This market was unsettled and declined ½c. for all positions, reflecting quiet demand and recent declines of flaxseed. Raw oil was reduced to 12.70c. per pound, tankcars, Minneapolis, September-November delivery and 13.81c., tankcars, f.o.b. New York. Withdrawals against were quite active.

**Peanut**—Crude was easier with competing oils, and declined fractionally. Tankcars were lower at 15¼c. per pound, f.o.b. mills. Refined dropped to 18½c., tankcars, New York basis.

**Soybean**—Crude continued easy and closed fractionally lower. Trading was quiet. Tankcars sold down to 9.05c. per pound, Decatur, unrestricted for September delivery. Refined salad declined to 11.05c., tankcars, New York basis.

Disappearance of crude soybean oil in July totaled 4,988 tankcars against 7,330 (revised) in June and 5,852, July last year. Visible supply at the end of July was estimated at 10,616 tankcars compared with 10,703 a year ago.

**Tung**—Trading was light and spotty. Tankcars were quoted at 23c. per pound, New York, prompt delivery, with firm bids of ¼c. less acceptable in some quarters. Drums ranged from 24½c. to 25c. per pound, spot, as to quantity.

Tung oil carryovers in the hands of the net exporting countries in July appeared to be at very low levels according to the Foreign Agricultural Service. However, with a bumper production of tung oil in Argentina and Paraguay in 1960-61, exports are expected to increase after August 1960. Once again Mainland China holds the key to generously adequate supplies for the export market. Unless China's shipments to the Western World are materially larger than last year, there will be a continued strong movement of U. S. tung oil held by the Commodity Credit Corporation, primarily to Western Europe.

## Miscellaneous

**Cocoa Butter**—Trading was spotty. Stocks on spot were unchanged at 58c. to 63c. per pound, according to quantity.

**Copra**—Shipments were unsettled and slightly lower. Sales were reported at

# Oils, Fats and Waxes

$167.50 per ton, c.i.f. Pacific coast, prompt, with bids at $165.

**Flaxseed**—Cash flaxseed declined 10c. a bushel under the impetus of first extremely heavy offerings of 1960-crop. Bids were at $3 a bushel, spot and to-arrive, basis Minneapolis. Crushers were principal buyers but exporters were also active. Forty-three cars were traded in the spot market and to-arrive bookings soared to 142 cars and about 400,000 bushels in roundlots. Quality of crop thus far is only fair, oil content considerably lower than last year and iodine also down.

## Fats and Greases

**Greases**—Trading was limited to actual needs. Prices were unchanged and more or less nominal. Choice white was unsettled by the break in lard and ranged from 7c. to 7⅛c. per pound, tankcars, delivered and yellow 4⅞c., same basis.

**Lard**—This market was weaker and sharply lower. Cash lard dropped to 10.30c. per pound, drums, Chicago.

**Tallow**—Business was spotty, chiefly for better grades. Quotations were unchanged and merely nominal. Bleachable fancy was quoted at 5¾c. per pound, tankcars, delivered; prime, 5½c.; special, 5¼c.; guaranteed fancy, 6c. and No. 1, 4⅞c., same basis. Edible tallow was lower, with lard and quoted at 9¼c., tankcars, delivered. Export inquiry lagged. Guaranteed fancy was nominal at 6¼c., bulk, f.o.b. steamer and 7¼c., drums, f.a.s.

## Fish Oils

**Cod**—Good demand was noted for shipment from Newfoundland, sales of new production took place at 7¼c. per pound, bulk, Gloucester, Mass. Offers were moderate and closely held. Consumer interest also was quite active.

**Menhaden**—Demand continued slow. Interest in replacements from domestic and export delivery lagged. Crude oil was generally held at 6c. per pound, tankcars, f.o.b. works. Refined light pressed was maintained at 9½c. per pound, tankcars, New York basis. Fishing operations have been reduced because of increased stocks of scrap and meal.

**Whale**—Despite a longer than usual season, Norwegian whalers failed to catch their legal limit this year according to reports from Oslo. Because of unfavorable operating conditions, eight expeditions caught only 4,565 of the 5,800 blue whales allowed them for 1960. Total whale-oil production reached 577,800 barrels compared with 712,900 barrels last year and 729,000 in 1958. Sperm-oil production amounted to 62,700 barrels, compared with 84,000 in 1959.

## Cake and Meal

**Cottonseed Meal**—Trading in new crop meal was spotty, but sufficient to keep the market steady. Heavy production was scheduled during the next two months. Meal, 41 percent was quoted at $54 to $55 per ton, sacked, Memphis and $57.50, Alabama, Carolinas and Georgia for September shipment.

**Linseed Meal**—Crushers held quotations firm and unchanged in this market but pressure of re-sale offers at 50c. to $1 less weakened market undertone. Brisk rate of shipping directons maintained heavy schedules and crushers did not press for new business. Export inquiry was active and sizable quantities are being pelleted for September shipment. Extracted meal, 34 percent protein, was quoted at $52.50 per ton, bulk, in carlots, f.o.b., Minneapolis, for September delivery, and $54, October forward. Old process expeller meal was unchanged at $58.50 for September, and $59.50, October-December.

**Soybean Meal**—Strength persisted in this market, several areas scoring additional 50c. to $1 advances on the heels of recent pronounced upturns. Unrestricted billing meal was firm and unchanged. Demand diminished at the higher levels but market was bolstered by growing tightness in supplies. Large formula feed manufacturers reported continuation of dull business, small country dealers comparatively active. Meal, 44 percent protein, was held $53 a ton, unrestricted, bulk, Decatur, for prompt shipment.

## Waxes, Vegetable

Quiet trading was noted in vegetable waxes last week. While business was inactive, prices were held at former levels. Carnauba continued steady, reflecting the firmness of replacements from Brazil. Crude candelilla stocks on spot were moderate and maintained at 55c. to 56c. per pound, as to quantity. Refined pure was unchanged at 60c. to 62c. Scarcity of offers of crude beeswax further strengthened this market. Crude African was in limited supply and raised to 52c. to 54c. per pound, depending upon quantity. Refined beeswax grades were firm and reflected the strength of crude.


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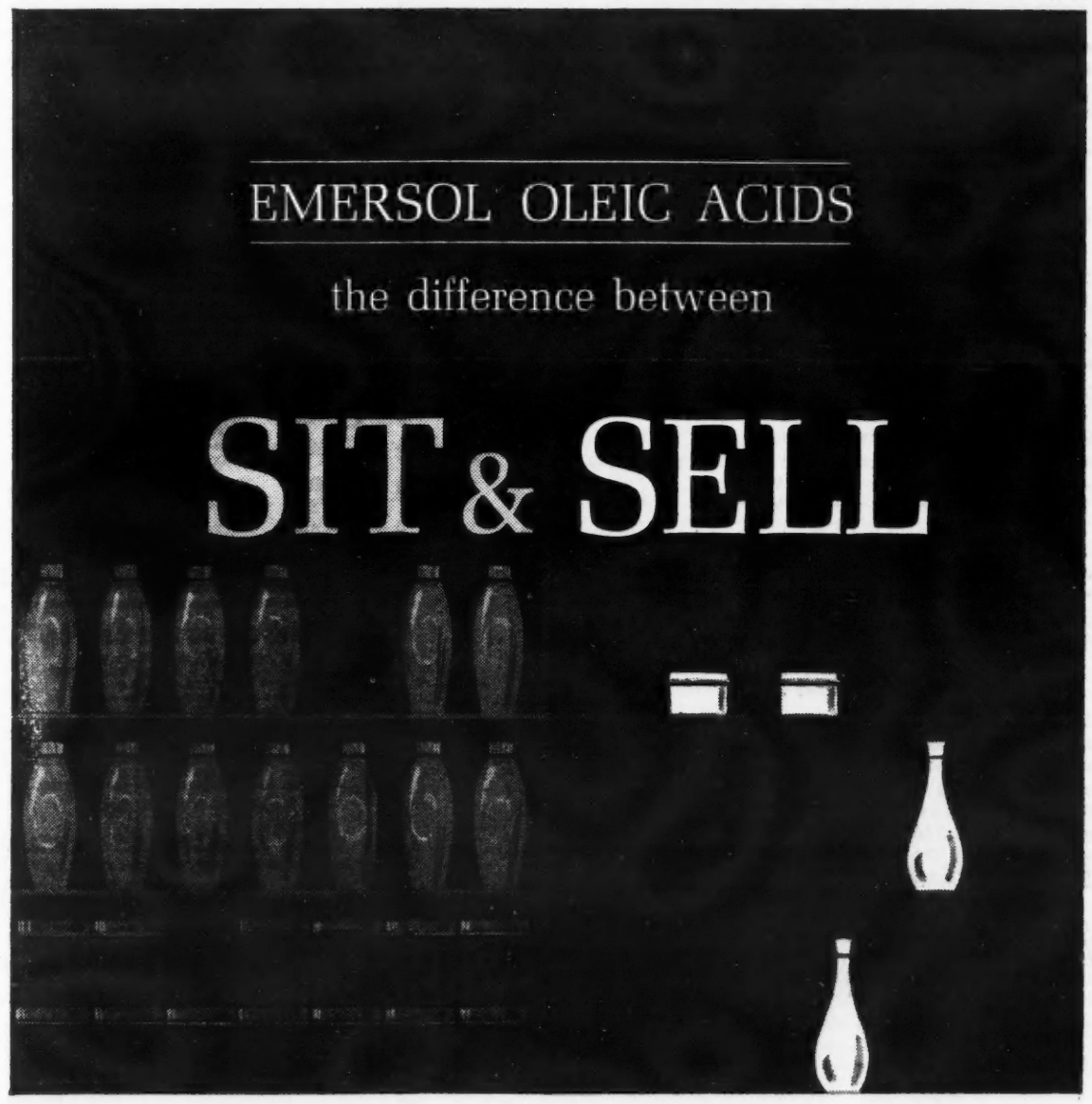

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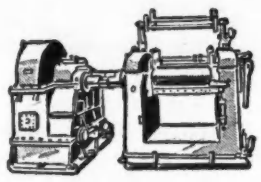

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The statement was made in connection with the commission's peril-point hearings to determine the point below which tariff's on imports cannot be lowered without injuring domestic industries.

## Tax Incentives Measure Is Killed by Senate Unit

The measure affording tax incentives t US business men investing overseas (HR 5), not given much chance to get through the 86th congress, was given an official death sentence last week by the senate finance committee. The legislation was rejected by a 5-5 tie vote.

Another tax relief bill, however, is not only alive but kicking, too. Congress okayed and sent on to the White House a measure permitting a US corporation abroad to lump together taxes paid to foreign nations when figuring credits against their American taxes.


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2—Sharples C-20 and C-27 Super-D-Hydrator, 316 S.S.
**1—Bird 18"x28", Solid Bowl, Continuous, 304 S.S.**
**1—Bird 32" x 50", Solid Bowl, Continuous, 316 S.S.**
3—Sharples PY14, PN14 Super-D-Canters 316 S.S.
1—Tolhurst 26" susp. Rubber Imperforate Basket.
**2—Fletcher 48" Suspended 316 S.S. Perforated Basket.**
2—Sharples #16, 304 S.S., 3 HP motor.

### REACTORS — EVAPS — CONDS — TANKS

**2—Glascote 750 gal. glass lined jacketed Reactors.**
1—1200 gal. SS jacketed Kettle.
1—650 gal. 304 S.S. Reactor with 100 sq. ft. Bayonet Heater.
1—1400 gal. Blaw-Knox, steel, jacketed, agitated Reactor.
**1—700 sq. ft. Buflovak 304 SS forced circulation Evaporator.**
1—550 sq. ft. Buflovak monel single effect Evaporator.
**1—7500 gal. 316 S.S. Vert. Storage Tank, 7'x25', 50 psi.**
1—750 gal. nickel clad Mixing Tank, 125# nickel coils.
**1—500 gal. S.S. Mixing Tank with nickel coils.**
1—4000 gal. Haveg Vert. Tank 8'x12'.
**6—7500, 6000 and 2000 gal. Rubber Lined Tanks.**
1—1500 gal. Stainless Pressure Tank, 5'x10', 90#.
1—12,000 gal. horiz. steel Pressure Tank, 7'6"x36', 200 psi.
6—Stainless Heat Exchangers; 1220, 786, 536, 370, 315, 250 sq. ft.
1—Falls Industries 100 sq. ft. Karbate Condensor.
1—24" dia. x 35', 304 S.S. Bubble Cap Column.

### FILTERS

**1—#5 Sweetland Filter 304 S.S. 120 sq. ft.**
1—Oliver 6' dia. Horizontal Filter, 316 S.S.
1—Oliver 5' x 6' Steel Rotary Vacuum Precoat Filter.
**1—U.S. 200 sq. ft. 304 S.S. Auto-Jet Filter.**
1—Oliver 5'3"x8' Steel Rotary Vacuum, vaportite housing.
1—Oliver 3' x 2' 347 S.S. Rotary Vacuum Filter.
**1—Feinc 5'x6' Stainless Steel Rotary Vacuum Filter.**
2—#10 Sweetland Filters, 27 leaves, 4" centers, 250 sq. ft.

### DRYERS

1—Buflovak Vacuum Shelf with 20—60"x80" shelves.
1—Devine Vacuum Shelf with 19—59"x78" shelves.
1—Devine Vacuum Shelf with 10—40"x43" shelves.
**2—Buflovak 42"x120", atmospheric double drum Dryers, complete.**
2—Devine 4'x9', single drum, atmospheric.
**1—Buflovak 3'x10' Rotary Vacuum Dryer.**
1—Baker Perkins 5'6"x6' Rotary Vacuum Dryer.
**2—Buflovak 5' x 30', 3' x 7'6" Rotary Vacuum Dryers 316 S.S.**
2—Louisville Rotary Steam Tube 6'x25', 6'x50'.
**2—Louisville 8'x50' Stainless Steel lined Rotary Dryers.**
9—Rotary Dryers 34"x30', 4'x40', 6'x50', 6'x60', 7'x80', 8'x87'.
1—Traylor 30"x18' Stainless Steel Rotary Dryer.
2—Link Belt, 7'5"x25', 6'4"x24", S.S. Louvre Dryers.
2—Atmos. Tray Dryers, 16 shelves, 40"x24".
1—P&S 10' wide Apron Conveyor Dryer 48' long.
**1—4' dia. 304 SS Spray Dryer.**

### MIXERS

**1—Farrel-Birmingham "Midget" Banbury Mixer.**
**2—Day Imperial 150 gal. jktd. double arm.**
1—Baker Perkins 100 gal., jacketed, double arm, 30 HP.
**1—Baker Perkins #16TRM, 150 gal. jktd., Vac. 60 HP.**
1—Baker Perkins 50 gal. jacketed, double arm.
**1—Baker Perkins 10 gal. jacketed 304 S.S. double arm.**
5—Day "Cincinnatus" double arm, 250 and 100 gal.
2—Steel jacketed Powder Mixers, 225 and 350 cu. ft.
1—Patterson 6' dia. Conical Blender 15 HP.
1—3' dia. Simpson Intensive Mixer.
**1—Stokes 21K, 304 S.S. Granulating Mixer 82 gals.**

### MISCELLANEOUS

1—Farrel Birmingham, 8" x 16", 2 Roll Chrome Plated Mill.
2—1SH, 1SI Mikro, Pulverizers, 3 HP.
3—Abbe 2½' x 3' porcelain lined Pebble Mill XP motor.
**1—Raymond 10' dia. Single Whizzer Separator.**
**1—#5 Mikro Atomizer with motor and cyclone.**
2—Bantam Mikro Pulverizers, S.S.
1—No. 1 Ball & Jewell Rotary Cutter.
1—#18 Cumberland Rotary Cutter.
3—Swenson Walker Continuous Crystallizers, 24" x 30' sections.
**1—#24 Rotex Sifter, 20" x 64", Quadruple deck.**
**1—#22 Rotex Sifter 40" x 56" double deck.**
**1—#81 Day Roball Sifter 40" x 120" single deck.**
25—Chlorimet, Durimet and Duriron Centrifugal Pumps 1½" to 6".

***Partial List of Values — Send for Complete Circular***

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**BRILL EQUIPMENT COMPANY**

35-61 JABEZ ST., NEWARK 5, N.J. Tel.: MArket 3-7420

# JUST PURCHASED

**2—Davenport 8' dia. x 60' long rotary dryers, 7/16" welded shell, internal flights, combus. chambers, fans, controls, burners, etc. Like new!**

**1—Louisville 7' x 70' rotary cooler or dryer, ½" welded shell, complete. 1952. Like new!**

**1—Patterson 6' dia. x 10' long porcelain lined pebble mill, jacketed. Like new!**

---

**DOUBLE ARM MIXERS**

**60—200 gal. Baker Perkins #17, sigma, blades jacket.**
1—150 gal. Baker Perkins #16, sigma, jacket.
3—100 gal. Baker Perkins #15, sigma, jacket, 25 HP.
**1—100 gal. Baker Perkins #15-uumm, dispersion blades, cored, 100 HP. compression cover, jacketed, motorized tilt.**
1—100 gal. J. H. Day, stainless, sigma, 10 HP.
4—75 gal. J. H. Day Imp., disp. blades.
1—20 gal. J. H. Day, #2 Cinc., sigma, jacket.

**CENTRIFUGALS—FILTERS**

**37—Sharples #AS-16V contin. cent., inconel.**
3—Sharples #C-27 Super-D-Hydrators, T316 SS.
**3—Sharples size #C-20 super-d-hydrators, T316 SS.**
1—Tolhurst 48" dia. susp. batch centrif., T304 SS, perf., 15 HP.
**6—A.T. & M. 40" dia. susp. batch centrif., T304 SS, HP.**
1—26" Tolhurst susp. basket centrifugal, steel.
1—12" A.T. & M. susp., T304 SS perf. basket.
**1—Niagara #510-28 T316 SS filter, 510 sq. ft.**
1—Niagara #53-36, T304 SS filter, 53 sq. ft.
**2—Sperry P. & F. filter presses, ni-resist, 210 sq. ft.**
1—Kelly #50 steel press. filter, 50 sq. ft.
2—Sweetland #7 steel press. filters, 117 sq. ft.
**1—Oliver 5'3" dia. x 8' face rot. vac. filter, precoat, unused.**
2—Oliver 5'3" x 3' rot. vac. filters, T316 SS, precoat, ASME.
1—American 4' dia. rotary vacuum disc filter, 3-disc.

**PEBBLE MILLS**

**1—Patterson 6' x 10', porox lined, jacketed.**
2—Patterson 8' x 10', batch mills, buhrstone lined.
**2—Hardinge 7' x 36" conical pebble mills, buhrstone lined.**
1—Allis Chalmers 6' x 18' burhstone lined.
1—Crosley 6'8" x 7', batch mill silex stone lined.
**13—Abbe Eng. 6' x 8', batch mills buhrstone lined, 30 HP.**
1—Porter 6' x 5', batch mill buhrstone lined.
1—Abbe 5' x 6', batch mill buhrstone lined.
2—Patterson 4'6" x 12' contin., buhrstone lined.

**DRYERS—EVAPORATORS**

**1—Mojonnier 1550 sq. ft. T304 SS evap., triple effect, sanitary, with preheaters, finishing pan, etc.**
**1—Buflovak 700 sq. ft. forced circulation evaporator, single effect, T304 SS. Late model—like new!**
1—Struthers-Wells 630 sq. ft. T316 SS calandria type evap.
**1—Buflovak 5' x 30' rotary vac. dryer, T316 SS, ASME.**
**1—Buflovak 3' x 7' rotary vac. dryer, T306 SS, ASME.**
1—Stokes #59A, 18" x 42" rotary vac. dryer.
1—Buflovak vacuum shelf dryer, 227 sq. ft., lithcote lined.
2—Buflovak vac. shelf dryers; 110, 98 sq. ft.
**1—Devine vac. shelf dryer, 80 sq. ft.—Unused.**
2—Pilot size 4' dia. spray dryers, T304 SS, elec. heating.
**1—Buflovak 42" x 120" double drum dryer, ASME, 125# wp.**
1—Buflovak 42" x 90" double drum dryer, w/conveyors, etc.
**1—American vacuum 36" x 84" double drum dryer.**
**1—Buflovak 5' x 12' single drum vacuum dryer—Unused.**
**1—Link-Belt #604-18 Roto-Louvre dryer, 6'4" x 18' long.**
1—Link-Belt #310-20 Roto-Louvre dryer, 3'10" dia. x 20' long.
1—Standard 3' x 23' rot. dryer, 1/4" welded shell, flights.

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## Ten Million Dollar Chemical Plant

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## Type 316 Stainless Steel Equipment

**7—Alloy Fabricators Type 316 SS pressure vessels, 4500 gals., complete with agitators and drives, 45 psi.**
2—Alloy Fabricators Type 316 SS, 4500 gals., jacketed reactors, complete with agitators and drives.
2—Alloy Fabricators Type 316 SS, 1000 gals., jacketed kettles, ⅜" material throughout.
12—Whitlock Type 316 SS pressure vessels with coils, 270 gals.
3—Type 347 SS pressure vessels with coils, 300 gals.
3—Type 316 SS mixing tanks, 6000 gals., complete with agitators and drives.
8—Acme Type 347 SS settling tanks with cone bottoms, 1000 gals.
1—2600 gals., Type 316 SS vertical vacuum receiver.
**3—Vertical Type 316 SS activated carbon absorbers, 5'4" dia. x 16'.**
1—Struthers Wells Type 316 SS, 500 lbs. pressure vessel, 75 gals., ASME code, National Board.
2—Project Fabricators Type 316 SS vacuum receivers, 160 gals.
2—Pfaudler 500 gals., glass lined jacketed kettles.
1—Pfaudler 20 gals., glass lined vacuum receiver.
1—Haveg 500 gals., vacuum receiver.
2—Aluminum horiz. 5000 gals., storage tanks.
5—Pfaudler horiz. glass lined storage tanks, 5000 gals.
1—Pfaudler vertical glass lined storage tank, 5000 gals.
2—Rubber lined tanks, 2500 gals., working pressure 45 lbs.
**4—Rubber lined horiz. storage tanks, 5000 gals., working pressure 45 lbs.**
**16—Rubber lined vertical storage tanks, 4500 gals., working pressure 45 lbs.**
4—Patterson Kelley SS condensers, 500 sq. ft.
7—Stainless steel condensers from 50 to 300 sq. ft.
4—Stainless steel packed columns, 18" x 15'.
2—Shriver 18" x 18" SS plate and frame filter presses, 10 chambers.
5—Shriver 42" x 42" wood plate and frame filter presses, complete with hydraulic closing device, 30 chambers.
**7—Buflovak Type 316 SS jacketed rotary vacuum dryers, 5' x 30', complete with 25 HP explosion proof motors and drives.**
3—Type 316 SS Ter-Meer continuous type centrifuges 4' dia. bowls complete with motors.
3—Readco SS jacketed horiz. blenders, complete with explosion proof motors and drives.
**3—Mikro #3TH SS pulverizers, complete with 40 HP explosion proof motors.**
1—Mikro SS bantam pulverizer, Model CF, complete with 3/4 HP explosion proof motor.
3—Gruendler SS, lab size, pulverizers.
**2—Nash, Model HS-6, Hastelloy B vacuum pumps, with 25 HP motors.**
**3—Nash, Model HS-6, Type 316 SS vacuum pumps, with 25 HP motors.**
3—Nash, Model TS-12, vacuum pumps, with motors.
1—Stokes Type 316 SS, jacketed, rotary vacuum dryer, 2' x 3'.
14—Copper jacketed mixing kettles, 3500 gals. each.
14—Copper jacketed rotary vacuum dryers, 8' x 10'.
5—American Type 316 SS blowers, Model MD, size 27".
6—200 gals., Type 316 SS vacuum receivers.
1—Fuller Type 316 SS, airveying system.
1—Aldrich Type 316 SS hydraulic triplex pump, size 2-3/4"x4", 500 psi.
1—Quimby Type 316 SS twin screw pump with 10 HP variable speed drive.
2—Powell Type 316 SS 10" hydraulically operated flanged gate valves.
2—Tyler Type 38 tandem SS Hum-Mer screens, size 42" x 9'-8".
50—Stainless steel and aluminum hoppers, all sizes.
100—Stainless steel centrifugal pumps, all makes and sizes.
3—200 gals., Type 316 SS jacketed kettles.
12—Type 316 SS Cyclone separators, 5'-2" x 10'-8" overall.
500 Tons of Type 316 SS pipe, fittings and valves, ranging from 2" to 6".
500 Tons of structural steel.
12—125 HP vertical agitator drives with Philadelphia drive, output speed 15.
2—150 HP vertical agitator drives with Philadelphia drive, output speed 15.
16—40 HP horizontal drives.

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## for CHEMICAL AND ALLIED INDUSTRIES

1—Buflovak stainless steel rotary vacuum dryer, 3' x 15'.

2—Struthers Wells type 316 SS 2000 gal. jacketed reactors, complete with agitators and drives.

2—Monel 2500 gal. jacketed autoclaves, 175# jacket, 175# internal.

2—Pfaudler glass lined jacketed reactors, complete with agitators and drives, 200 gals., each.

1—Nooter 100 gal. stainless steel reactor, complete with agitator and drive.

1—Struthers Wells type 316 SS 400 gal. reactor, complete with coils, agitator and drive, 250# coils.

1—Hersey stainless steel rotary dryer, 3' x 16'.

1—Allis Chalmers SS 6' x 50' rotary dryer complete.

2—Louisville stainless steel rotary dryers, 8' x 50'.

1—General American 7' x 40' rotary dryer, ⅜" welded shell.

1—Baker Perkins Size 4, laboratory mixer, sigma blades, 1 gal. total capacity.

1—Stewart Bolling 2 roll rubber mill, 6" dia. x 12".

1—Stainless Steel packed column, 18" x 9'.

4—Sperry stainless steel filter presses, P&F, 24" x 24", closed delivery, 12 chambers.

1—Niagara Stainless Steel filter, Model 510-28.

1—Richmond Engineering type 316 SS, 40 cu. ft., double ribbon blender.

10—Robinson stainless steel double ribbon blenders, 255 cu. ft.

1—Banbury #1 mixer, chrome plate rotors, complete with 50 HP motor.

1—Williams, "Comet" 4 roll mill, complete.

1—Baker Perkins double arm, jacketed, sigma blade mixer, Size 16 TRM, 150 gal.

25—Davis Engr. SS heat exchangers, 104, 121, 139 and 168 sq. ft., NEW.

1—Downington Type 316 SS heat exchangers, 750 sq. ft.

1—Cleveland SS double cone blender, 85 cu. ft. working capacity, complete with motor and drive.

1—Oliver SS rotary vacuum precoat filter, 3' x 4'.

1—Stokes #412F vacuum pump, complete with motor.

4—Tolhurst 40" rubber covered, center slung centrifuges, complete with perforate baskets and motors.

8—Western States 40" Type 316 SS, suspended type centrifuges, complete with perforate baskets, plows and 40 HP motors.

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4—Werner & Pfleiderer 200 gal. jktd., sigma blade Shredders.
1—Ball & Jewell #2 Cutter.
4—Link-Belt Vibrating Screens 4' x 8'.
1—Jeffrey Vibrating Conveyor.
1—30" Sperry Filter closed del., 3-eye, 39-plates, 40-frames.
1—42" Sperry Filter 40-plates, 41-frames, hyd. closing, open del.
1—International Ball Mill, porcelain lined, 48" x 60", 15 H.P. Unibrake Motor, 2-drums balls. Like new.
1—Schutz-O'Neill Pulverizer 22", Style D.
1—Abbe Pebble Mill 5' x 22'.
1—Sparkler Filter 33-S-28, with Scavenger Plate, steam jacketed.
1—2 qt. Sigma Blade S.S. Mixer.
1—250 gal. Kettle, nickel jacket, 100#.
1—Bartlett Hog Mill with 7½ H.P. motor.
1—430 S.S. Tank 3000 gal. vert. ⅜ plate, with 2 pc. cover.
2—Vacuum Pumps, Gardner-Denver, 5" bore 4" stroke, with 7-½ H.P. motors.
1—#316 S.S. Reactor 265 gal. jkt.
2—Twin Screw Mixers 120 gal. jkt.
2—Aetna Wafer Stills 20 gph, new.

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## BUFFALO 32" x 90" DOUBLE DRUM DRYER
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Buffalo 32" x 90" Double Drum Dryer
Buffalo Vac. Drum Dryer 24" x 20".
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Gould 75 HP Centrifugal 250 PSI.
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TANKS—Stainless, GI Lined, Steel.

Partial Listings — Write for Bulletins

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3500 to 236 sq. ft. Adm. Tubular Condensers.
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Buflovak Vacuum Shelf Dryer 18 Shelves.
Buflovak 42" x 120" Atmos. Double Drum Dryers.
40" S.S., Rubber Covered Steel Centrifuges.
Sharples C27 Super-D-Hydrators Vaportite.
Shriver C. I. 30" P&F Filter Presses.
30 gal. 316 S.S. Jkt. Autoclave, 1000 PSI.
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2—Stainless steel vertical tanks 1200, 1000 gallons.
2—Fitzpatrick comminuting mills models D and K.
4—Stokes tablet presses F, R, RD-3, 280-C.
5—80 gallon stainless steel agitated autoclaves, 500 PSI.
1—40" suspended centrifuge with perforated rubber basket.
1—400 gallon stainless steel jacketed and agitated reactor.
3—24" x 24" filter presses, iron, everdur, lead.
1—Porter 29 cu. ft. double cone blender.
4—Burrstone pebble mills 400, 250, 100, 50 gallons.
1—Sharples Super-D-Canter model PY-14 type 316 stainless steel.

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**Aluminum Condenser, 350 sq. ft.**
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**1—Procter & Schwartz finned Drum Drier.**
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## Indian Government Starts New Fertilizer Price Policy

The Indian government has a new pricing policy for fertilizers, according to the US Department of Commerce.

The Indians intend to set up a pool price from time to time. The idea is to assure equal selling prices for fertilizers of comparative quality, whether produced by public or private plants.

In making the move, it's hoped that whatever price competition arises between government and private installations will stem from producing fertilizers at lower costs and not from deliberate price-cutting.

## *Chemical Plants*

*—Continued from page 7*

industry are consequently narrowing, the survey says.

The trouble naturally results from overcapacity, which, according to Value Line, has been the industry's Number 1 problem since early 1955.

Thus, although output of chemicals has increased twice as fast as all industrial production during the past fifteen years, profits of most chemical makers have not shown the growth rate such a production expansion would suggest.

Paradoxically, the chemical industry continues to pour money into plant expansions during this period of tough competition.

Value Line cites the following reasons for this phenomenon:

- Some of the plans were made when prospects looked brighter.
- Projects, once started, are difficult to stop.
- A good part of current expenditures are for efficiency improvement, rather than expansion.

But these answers fail to satisfy Value Line.

The big reason, according to the investment survey is that:

"Chemical managers continue to invest in new facilities because they are convinced that they will make money out of them. They are betting on a continuation of economic growth. But more important, they believe that usage of chemicals will continue to advance at a faster rate than the overall economy.

"They see plastics working their way into the building trade, into machine parts and other fields. They see the synthetic fibers replacing natural materials. They see a bright future for rocket fuels, aerosol propellants and the myriad of new products which come out of the laboratories every year. They can compute the greater need for building block materials. And, they want to be ready!"

## Montecatini, Imperial Ink Polypropylene Fiber Pact

Montecatini has licensed Imperial Chemical Industries, Ltd., to produce its "Meraklon" polypropylene fiber exclusively in the United Kingdom.

"Meraklon," now manufactured in Italy by Polymer S. A. at Terni, was discovered by an Italian scientist and intensively researched by the Montecatini organization.

Imperial has already received from Montecatini a patent license to produce polypropylene for plastic applications, and its polymer plant of 10,000 tons yearly capacity will go on stream shortly.

## Phosphate Found in Africa, And It's Near the Railroad

A 10-million-ton deposit of phosphate has been discovered in northern Tanganyika, according to the Foreign Agricultural Service. The deposit is near a town called Arusha, which is close to roads and railroads.

Development plans call for the processing and marketing of about 50,000 tons of fertilizer annually. This should prove a boon to farmers in Tanganyika and Kenya, who now have to import all their phosphatic fertilizers.

## *Current Market Quotations*

*—Continued from page 28*

| | | | |
|---|---|---|---|
| Zinc oxide, pigment, American process, lead-free bgs., c.l., frt. alld | lb | .14¼- | — |
| bgs., l.c.l., 10 tons or more, same basis | lb. | .15 - | — |
| bgs., l.c.l., smaller lots, same basis | lb. | .15½- | — |
| leaded, 35% bgs, c.l., mills, frt. alld | lb. | .15⅝- | — |
| bgs., l.c.l., 10 tons or more, same basis | lb. | .15⅞- | — |
| Zinc oxide, leaded, 50%, bgs., c.l., same basis | lb. | .15¾- | — |
| Zinc oxide, pigment, American process, leaded, 50%, bgs., l.c.l., 10 tons or more, same basis | lb. | .16¼- | — |
| USP, gran., dms. | lb. | .26 - | — |
| French process, green seal, bgs., c.l., mills, frt alld | lb. | .16¼- | — |
| bgs., l.c.l., 10 tons or more, same basis | lb. | 16¾- | — |
| bgs., l.c.l, smaller lots, same basis | lb. | .17¼- | — |
| red seal, bgs., c.l., same basis. | lb. | .15¾- | — |
| bgs., l.c.l., 10 tons or more, same basis | lb. | .16¼- | — |
| bgs., l.c.l, smaller lots, same basis | lb. | 16¾- | — |
| white seal, bgs., c.l., same basis | lb | .16¾- | — |
| bgs., l.c.l., 10 tons or more, same basis | lb | .17¼- | — |
| bgs., l.c.l., smaller lots, same basis | lb | .17¾- | — |
| Zinc oxide, USP dms., c.l., frt. alld. | lb. | .18¼- | — |
| dms., l.c.l., 10 tons or more, same basis | lb | .18¾- | — |
| dms., l.c.l., smaller lots, same basis | lb. | .19¼- | — |
| Zinc phenolsulfonate, NF, gran., dms. | lb. | .45 - | .46 |
| NF, powd., dms. | lb. | .48 - | .49 |
| Zinc resinate, precip, 7.2-7.6% Zn., dms., frt. alld | lb. | .40¼- | — |
| Zinc silicofluoride, dms., works | lb. | .12½- | .14 |
| Zinc stearate, tech., USP, ctns., c.l. ctns., l.c.l. | lb. | .41 - | — |
| Zinc sulfate, powd., monohydrate, 36% Zn, bgs., c.l., divd.E. | lb. | .42 - | .46 |
| 100 lbs. bgs., l.c.l., divd. E. | 100 lbs. | 8.75 - | — |
| Zinc sulfate in bbls 40c. higher. | 100 lbs. | 9.75 - | — |
| Zinc sulfide, pure, bgs., c.l., divd | lb. | .2530- | — |
| Zinc undecylenate, dms. | lb. | 2.00 - | — |
| Zinc, yellow (see Zinc chromate). | | | |
| Zinc-ammonium chloride, bgs., c.l., works | 100 lbs. | 10.25 - | — |
| bbls., c.l., works | 100 lbs. | 10.85 - | — |
| bbls., l.c.l., works | 100 lbs. | 11.35 - | — |
| Zinc formaldehyde sulfoxylate, basic, 300-lb. dms., frt. alld | lb. | .26 - | — |
| Normal, 250-lb. dms., frt. alld | lb. | .52 - | — |
| Zircon (G) gran., bgs., c.l., works. | lb. | .03½- | — |
| bgs., 5 tons to c.l., works | lb. | .03⅝- | — |
| bgs., 1 ton to 9,999-lb. lots, works | lb. | .04 - | — |
| bgs., smaller lots, works | lb. | .06½- | — |
| Zircon (G), milled, bgs., c.l., works. | lb. | .04¼- | — |
| bgs., 5 tons to c.l., works | lb. | .04⅜- | — |
| bgs., 1 ton to 9,999-lb. lots, works | lb. | .04¼- | — |
| bgs., 500-1,999-lb. lots, works | lb. | .07½- | — |
| Zircon (G) in barrels 1c. higher. | | | |
| Zirconium acetate soln., 13% $ZrO_2$, dms., c.l., 30,000 lbs. min., works | lb. | .23 - | — |
| Zirconium hydride, powd., electronic grade, dms., works | lb. | 14.00 | -15.00 |
| Zirconium oxide, CP, white, grd., bbls. or bgs., works | lb. | 1.50 - | — |
| Electric-fused lump, bgs., 500 to 1,999-lb. lots, works | lb. | .48¼- | — |
| bgs., smaller lots, works | lb. | .51 - | — |
| milled, bgs., c.l., works | lb. | .62 - | — |
| bgs., 5-ton lots, works | lb. | .62½- | — |
| bgs., 1-ton to 9,999-lb. lots, works | lb. | .63¼- | — |
| bgs., 500 to 1,999-lb. lots, works | lb. | .64 - | — |
| bgs., smaller lots, works | lb. | .66 - | — |
| Zirconium Oxide, Glass polishing grade, 94-97% $ZrO_2$, bgs., works | lb. | .55 - | .65 |
| Opacifier grade, 85-90% $ZrO_2$, bgs., | lb. | .27 - | .50 |
| Stabilized oxide, 91% $ZrO_2$, milled, bgs | lb. | .62 - | .85 |
| Zirconium oxychloride, cryst., ctns., 5-ton lots, works | lb. | .37½- | — |
| bgs., l.c.l., smaller lots, same basis | lb. | .16⅝- | — |

## *Trade Name Chemicals*

*—Continued from page 55*

as builders in soaps because of salt effect. However, in an alkyl aryl sulfonate type of detergent the neutral salt could be used in concentration as high as that of the active ingredient. The amount of 100 percent active ingredient in the average syndet is placed at a little over 20 percent, according to one estimate.

Sales figures reported by the Association of American Soap and Glycerine Producers includes builders and other chemicals added to the actual syndets. The Tariff Commission reports sales figures on a 100 percent basis.

The sale of all surface active agents last year, according to the Tariff Commission, amounted to 1.36 billion pounds valued at $268 million as against sales of 1.20 billion pounds valued at $235 million in 1958.

Monsanto also offers **"Sterox CD,"** a nonionic surface active agent, emulsifier and detergent. Chemically, the product is a polyoxyethylene ester of tall oil and contains at least 97.5 percent active material, the company reports.

Polyoxyethylene tall oil syndets are sold mostly for household use as powders. They contain about 20 percent active ingredient with the balance being neutral or alkaline builders. Small amounts of an anti-flocculant are added along with other materials to modify color, flow and other properties.

Polyoxyethylene syndets are made by reacting an organic molecule with strong hydrophobic groups and an active hydrogen with ethylene oxide. The ethylene oxide forms a polyoxyethylene chain with one end having a hydroxyl group and the other linked to the hydrophobic molecule. Fatty and rosin acids of tall oil link as esters with the polyoxyethylene chain.

If the tall oil acids are first reduced to their alcohols and then polymerized with ethylene oxide, the tall oil alcohols link as ethers with the polyoxyethylene chains. The extra step of reducing to the alcohols while increasing the cost, also results in syndets which do not hydrolyze. This becomes important in formulations like emulsified products where the syndet remains in water for a long time.

Tall oil linked polyoxyethylenes have good hydrophilic (water-clinging) lyophilic (oil-clinging) values and provide a good balance between detergency and economy. They have also found application in textile processing and pesticide emulsions. Increased availability of propylene oxide and other higher oxides is reported to have led to increased interest in their polymers analogous to the polyoxyethylenes.

Other surfactants offered by Monsanto include **"Sterox SK," "6"** and **"21-K."** Major end-use of the latter product, according to the company, is in the acid fulling and scouring of wool and wool-containing fabrics. The fulling operation consists of mechanical pounding and squeezing of the loosely woven fabric in the presence of a fulling agent which acts as a lubricant and lets the individual fibers migrate so that uniform shrinkage occurs throughout the thickness of the fabric. An additional function that a good fulling agent should perform at this stage is the emulsification of oils and removal of soil so that contaminants can be easily washed out in subsequent scouring and ringing.

The "Ultrawets" of Atlantic Refining Company are alkyl aryl sulfonate type anionic surface active agents. These products are compatible with acid, alkaline and neutral salts, soaps, anionic and nonionic detergents and other materials commonly used in cleaning compounds. However, like all anionic detergents they react with cationic surface active agents. Among end-uses for the **"Ultrawets"** are scouring powders, paint cleaners, light and heavy duty detergents, window cleaners, liquid soaps and shampoos and laundry detergents.

**"Ultrawet 35KX"** is a sodium alkyl aryl sulfonate slurry containng a minimum of 35 percent solids and a minimum of 31.5 percent active. Chemically, the material is stable in acid or alkaline media, and low sensitivity to heavy metal ions makes it especially useful in hard water. The material finds use in liquid detergents, wet textile processing, emulsion polymerization and as a post stabilizer for emulsions. **"Ultrawet K"** is a 90 percent active flake of a high molecular weight sodium alkyl aryl sulfonate and a maximum 10 percent sodium sulfate. This product has good foaming and detergency characteristics the company reports, and is available in two densities.

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## Coatings Materials

—*Continued from page 49*

cated that one leading producer of dibutyl phthalate was sharply reducing his output of the phthalate due to its greater requirement of anhydride than any of the other phthalte esters.

While production of dibutyl was down in June, output of the dioctyl phthalates scored sizable gains. As reported by the Tariff Commission, dioctyl phthalates (di-n-octyl, di-isooctyl, di(2-ethylhexyl) phthalates and mixtures) production advanced by nearly 2.3 million pounds in June when compared to the previous month. For June of last year, production of the dioctyl phthalates was reported by the Tariff Commission at 11,512,792 pounds.

Tricresyl phosphate production went from 1,900,745 pounds in May to 3.174.744 pounds in June. Production during June of last year was 2,453,950 pounds. For May, 1959, production of tricresyl phosphate amounted to 2,688,842 pounds, again on the basis of reports supplied by the Tariff Commission.

### Natural Resins

**Shellac**—Market conditions continue along in a steady groove. Demand from industrial sources is routine. Prices are unchanged from previous weeks. Supplies are reported moving into domestic markets at normal rates. No change in these conditions are anticipated over the next few weeks.

### Fillers & Inerts

**China Clay**—Except for a few small changes, to make up for rising production costs, listings for china clay remain at about the same levels established earlier in the year. Most popular grade, 325 mesh is currently listed in the range of $11 to $17 per ton, c.l., Georgia, works. Overall market conditions are reported to be routine.

### Miscellaneous

**Casein**—After a brief, but marginal, display of activity two weeks ago, the market for Argentine casein slipped back into the doldrums last week. Listings for Argentine narrowed in range to 20c. to 20¼c. per pound, off about ¼c. per pound from last week's 20½c., upper range quotation. Very little interest was reported.

Stocks of casein in the Argentine are reported to be on the improved side due to the lessened demand and the start of the production season there. One source feels that production this year should be good, but predictions as to any relation between the level of stocks and other market conditions could not be made. The source points out that no two years in the casein market are ever alike, therefore upsetting any attempt to establish a pattern, before it is made.

Late September should see a return to the normal rate of activity in the casein market. Presently, stocks and prices for Australian, New Zealand and Polish casein hold to their week-old levels.

### Naval Stores

**Pine Gum** — The average commercial crude price per standard barrel for the week ended August 20, was $41.70. For the previous week the price per barrel was $41.10. A year ago the price was $28.80.

For the week ended August 26, the loan price was $25.90. The volume of gum deliveries was 19,600 including 122 loans. The previous week saw 19,200 deliveries including 94 loans while a year ago gum deliveries were 18,904 with 244 loan.

The average content per barrel of turpentine was 10.75 gallons, with rosin content at 299.2 pounds. Gum grading was: 49 WW; 19 WG; 12 N; 20 M.

Weekly weighted averages were: WG 16.85; K or better 16.16; G or better 16.50. No averages for WW, N, or M.

**Rosin, Gum**

(USDA, per 100 lbs.)

| | Fri. Aug. 26 | Mon. Aug. 29 | Tues. Aug. 30 | Wed. Aug. 31 | Thurs. Sept. 1 |
|---|---|---|---|---|---|
| Drums— | | | | | |
| G | $16.50¹ | ... | ... | ... | ... |
| K | 16.00 | $16.50¹ | ... | ... | ... |
| WG | ... | ... | $16.80 | ... | ... |
| WW | 16.85 | ... | ... | ... | ... |
| Bags— | | | | | |
| N | 16.75 | ... | ... | ... | ... |

Tankcars (for week ended Sept. 2)—
K or better, $15.60

Sales, USDA
693* 11 4‡ 541* ...

New York
(Per 100 lbs., c.l., Friday)
WW, $18.25; WG, $18.10; N, $17.85; K-M, $17.75

**Turpentine, Gum**

(USDA, per gal., 7.2 lbs.)

| | | | | | |
|---|---|---|---|---|---|
| Price | ... | .45½ | .46 | ... | .46 |
| Sales | ... | 8,000¶ | 6,000¶ | ... | 6,000¶ |

* Drums equivalent. ‡ Carlots. ¶ Gallons.
¹ Or better.

## *Tung Oil, Nuts*

—*Continued from page 7*

quota on imports of tung nuts and tung oil equal to 26 million pounds oil equivalent. The quota restrictions will expire October 31.

A public hearing in connection with the investigation will be held in the Tariff Commission's hearing room, Tariff Commission Building, 8th and E Streets, NW, Washington, D.C., beginning at 10 a.m. on September 21.

Those wishing to testify should notify the commission secretary in writing at least three days in advance of the hearing date.

## *Helium Purchase Powers*

—*Continued from page 7*

measure will preserve this needed resource for the country.

The bill provides no funds, but, instead, sets up an annual borrowing authority to continue over the years. This will enable Interior to sign contracts with private producers of natural gas of periods up to twenty-five years.

## *Live Polio Vaccine Cost Causes Disagreements*

—*Continued from page 3*

Dr. William S. Clark, director of medical care for the National Foundation, who feels that the approved oral vaccine will provide 99 perecent immunity against polio.

The National Foundation provided both Dr. Jonas Salk and Dr. Sabin will the funds to find a workable polio vaccine.

The statements of Drs. Sabin and Clark rebut Dr. Leroy E. Burney, Surgeon General of PHS, who is on record as saying that "the live vaccine will not replace the Salk vaccine."

Dr. Burney believes there is need for both polio preventives and that "they will complement each other."

Meanwhile, PHS—as noted in OPD's August 29th story—last week issued a list of detailed requirements for potential producers of the three approved strains of live polio vaccine: Sabin types I, II and III.

Following is the section dealing with the production of the live attentuated polio virus vaccine:

2.1 **Establishment of a seed virus system.** The virus in the final product shall represent no more than three tissue culture passages from the seed lot which has met the criteria of acceptability set forth in the criteria for acceptability of new strains.

2.2 **Housing, handling and conditioning of monkeys.** Monkeys to be used for the production of live polio virus vaccine shall be maintained in isolation for at least six weeks in cages protected on all sides except the front prior to use in the manufacture of the vaccine.

Not more than two monkeys shall be permitted per cage and cage mates shall not be interchanged. Such monkeys shall be negative to tuberculin prior to this period. The death rate, excluding deaths from accidents or causes demonstrated as not due to infectious diseases, shall not exceed 5 percent per month for any selected group during this period.

2.3 **Types of tissue culture preparation permissible.** Only monkey kidney tissue cultures may be used in the preparation of live polio virus vaccine. The use of continuous line cells is specifically prohibited. Introduction of continuous line cells into production areas is likewise prohibited.

2.4 **Temperature of incubation.** Tissue culture production vessels shall at no time be maintained at a temperature above 35.0°C. during the course of virus propagation for vaccine.

2.5 **Filtration.** After harvesting, virus fluids shall be passed through filters equivalent to Seitz ST-1.

2.6 **Possibility of contamination during processing to be minimized.** Processing shall be conducted in such a manner as to minimize the possibility of contamination with infectious agents.

2.7 **Personnel in live polio virus vaccine production areas.** Personnel while working in polio virus vaccine manufacturing areas may not work with other infectious agents in any other laboratory and return to the live polio virus production area during the same working day.

All possible steps shall be taken to insure that personnel are thoroughly immunized to polio virus in a way to minimize the possibility that they may become excretors of polio virus. Only personnel actually concerned with propagation of tissue cultures, production of the vaccine, and unit maintenance, shall be allowed in live vaccine manufacturing areas during the interval when active work is in progress.

Casual visitors shall be excluded from such units at all times and all others having business in such areas shall only be admitted under supervision. Street clothing, including shoes, shall be replaced by suitable laboratory clothing before entering a live virus manufacturing unit.

2.8 **Separation of production facilities.** Specific space, which may be individual or multiple units, shall be set aside for extended periods of time for work with live polio virus vaccine and shall not be used for any other purpose during the vaccine manufacturing period. All areas used for live polio virus vaccine production shall be decontaminated prior to the initiation of such production.

To minimize the hazard of contamination, work space shall be isolated either in a separate building or buildings, in a separate wing of a building, or in quarters at the blind end of a corridor so situated as to be an independent unit. Such separate unit is defined as the space for vaccine preparation including tissue culture production, virus production and related storage.

Test procedures which potentially involve the presence of micro-organisms including viruses other than the vaccine strains, or the use of tissue culture cell lines other than primary cultures, may not be conducted in live polio virus vaccine production areas.

Following are the criteria established by PHS for acceptability of new strains:

A. **Laboratory tests for safety.** Each strain shall be tested for neurovirulence in monkeys by the intrathalamic, intraspinal and intramuscular routes of injection. The intrathalamic and intraspinal injections are done as described in section 3.2 of these recommendations.

For the intramuscular injection, the undiluted virus fluids containing at least $10^{7.7}$ TCD$_{50}$ are injected in a volume of not more than 5 ml. into the gluteus or gastrocnemius muscle of monkeys.

No strain is considered acceptable unless its neurovirulence by each route of inoculation is no greater than that of the reference strain.

B. **Viremia in man.** This strain characteristic is not a definitive requirement but acceptable strains shall not have a potential for producing viremia in man.

C. **Genetic stability.** Strains must show absence of capacity to revert to significant neurovirulence after passage in man.

D. **Clinical safety.** There shall be evidence to show that each strain is free of harmful effects upon administration to approximately 100,000 susceptible individuals under circumstances where adequate epidemiological surveillance of neurological illness has been maintained. The population should contain a substantial number of adults.

E. **Clinical effectiveness.** There shall be a demonstration of immunogenic effect following oral administration of a virus dose which is not greater than that which has demonstrated clinical safety. The production of specific antibodies is accepted as a presumptive indication of immunity.

## *Color Additives Law*

—*Continued from page 3*

stress on color additives at the expense of the other measure.

The senate then went on to give the agency the full amount it sought but a conference committee decided to split the difference and an appropriation of $1.2 million was agreed upon.

One of the problems the agency will have to resolve, according to Kenneth E. Mulford, chairman of the food additives committee of the Manufacturing Chemists' Association, arises from the fact that the color additives law says that substances "capable" of imparting color are subject to the law.

Excepted are those which the Secretary of Health, Education & Welfare determines by regulation are used solely for non-coloring.

Since most substances can "impart" color, Mr. Mulford told American Bar Association's food, drug and cosmetic law division in Washington last week, this would appear to mean that all food ingredients, other than pesticide residues, which carry a specific exemption, are subject to regulation stating they are used only for non-coloring.

Mr. Mulford, who is assistant to the executive vice-president of Atlas Powder that general regulations under the color law include a statement that "the definition does not include food ingredients which in their actual use do not color the food to a degree apparent to the naked eye."

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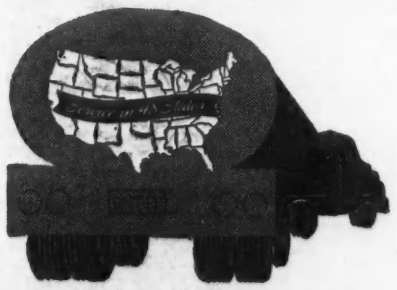

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